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**Federal Highway
Administration**



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PROCEEDINGS OF THE FIFTH NATIONAL JOINT USE CONFERENCE

**October 26-27, 1998
Louisville, Kentucky**

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**PROCEEDINGS
OF THE
FIFTH NATIONAL
JOINT USE CONFERENCE**

**October 26-27, 1998
Louisville, Kentucky**

**Federal-Aid and Design Division
Federal Highway Administration
Washington, D.C. 20590**

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FOREWORD

The Fifth National Joint Use Conference was held in Louisville, Kentucky, on October 26-27, 1998, at the Galt House Hotel.

The objective of the conference was to focus attention on highway/utility joint use issues. Speakers representing power, cable television, and telephone were invited to participate on the program. The record of their remarks is contained within these proceedings of the conference.

About 200 professionals attended the conference. In addition to the technical sessions, workshops were conducted

on pertinent highway/utility joint use topics. These workshops provided an opportunity for the conference participants to discuss in detail issues raised in the technical sessions or of particular concern.

The enthusiasm, foresight, dedication, and competence of the conference coordinator; the conference staff members; and those people who participated on the program, on the planning committee, and/or in the conference were instrumental in making the Fifth National Joint Use Conference a success.

CONFERENCE CHAIR
Reva Reed
RMR Consulting Services

MODERATORS
Don Gordon (Electrical Consultant)
Marie Piper (BellSouth)

PRESENTATIONS

Canadian Joint Use Agreements

Denis Marquis
Bell Canada

&

Sylvain Mercier
Hydro Quebec

**Wireless Attachments to
Transmission Structures**

Jean Howard
Florida Power & Light

Telecommunications Act Update

Shirley Fujimoto
McDermott, Will and Emery

Allocation of Space/Cost

Robert Legato
Representing Bellcore

**Managing Combined Engineering
for Make-Ready Work**

Tom Jackson
Georgia Power

**Right of Way Use and Deregulation
of the Natural Gas Industry**

Bob Gardner
Atlanta Gas Light Company

Impact of TEA-21 on Utilities

Paul Scott
Federal Highway Administration

**Engineering Procedures Required for
Third Party Attachments**

Glenn Davis
Conectiv

WORKSHOPS

**Coordination of New Attachments
(Poles, Conduit, Rights of Way)**

Tom Jackson
Georgia Power
&

Wil Arnett
Utility Support Services

**Problems Relating to Permitting
(Climbing Space)**

Rex Brooks
Gulf Power

Directional Boring

Steve McLaughlin
Pledger, Inc.

Federal-Aid Issues

Paul Scott
Federal Highway Administration

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CONFERENCE CHAIR

**REVA REED
RMR Consulting Services
P.O. Box 845
Uniontown, OH 44685
(330) 699-6777**

DAY ONE MODERATOR

**DON GORDON
Electrical Consultant
Wisconsin Electric (Retired)
5433 Lakeview Drive
Greendale, WI 53129-1931
(414) 421-3749
dgordo@juno.com**

CANADIAN JOINT USE AGREEMENTS

DENIS MARQUIS
Bell Canada
1050 Beaver Hall Hill
Montreal, Quebec
Canada H2Z 1S4
(514) 870-2565 Phone
(514) 391-2037 FAX
denis.marquis@bell.ca

SYLVAIN MERCIER
Hydro Quebec
680 Sherbrooke Street, West
15th Floor
Montreal, Quebec
Canada H3C 4T8
(514) 289-2211, Ext. 7163 – Phone
(514) 289-7178 FAX
mercier.sylvain@hydro.qc.ca



A Bell Canada / Hydro-Québec experience

NATIONAL JOINT USE CONFERENCE



Presented by: Sylvain Mercier (Hydro-Québec) &
Denis Marquis (Bell Canada)



Hydro
Québec

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A Bell Canada / Hydro-Québec experience

Brief outlook



- | | |
|---|--|
| ■ Incorporated in 1880 | ■ Created in 1944 |
| ■ 42 000 employees | ■ 21 000 employees |
| ■ Covers Québec / Ontario | ■ Covers most of Québec |
| ■ 7 M customers | ■ 3.5 M customers |
| ■ 8.5 B\$ gross revenues | ■ 31 500 MW inst. capacity |
| ■ Owns 700 000 poles
(single and joint use - QC) | ■ 8.3 B\$ gross revenues |
| ■ Listed on stock market
(Parent company - BCE) | ■ Owns 1 700 000 poles
(single and joint use) |
| | ■ Crown corporation
(Gov't of Québec) |



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History

- Joint use partnership for a long time
- First “ formal ” contract - 1969
- Significant change in contract development - 1981
 - Creation of geographical entities and associated ownership responsibilities
 - More joint design of structures
- Last contract expired - Dec. 1996



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Negotiation background

- Historical long negotiation process
- Business relationship needed revamping
- Other joint use contracts also expired elsewhere in Québec
- New approach requested by both parties



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New negotiation approach

- Negotiation team
 - Two high level representatives from each enterprise
 - One external facilitator
- Major issues to be negotiated agreed formally by both parties
- Short time frame to report results at presidential level



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Some basic principles

The new agreement shall

- Aim for unconditional fairness
- Be perceived as fair by all involved
- Generate substantial benefits to both parties through joint use
- Be based on facts, or at least use reasonable assumptions
- Introduce a "pay-per-use" concept
- Encourage optimization and joint cost savings
- Promote a partnership culture



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Negotiation outcome

- Facilitator became a mediator
- Agreement in principle approved by the two presidents within the time line
- Full contract signed 5 months later
- Perceived as WIN-WIN by both parties



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Highlights of agreement

- New arrangement for pole utilization
 - Better access for Hydro to unused space
 - Optimization of the «common pole»
- Pole line clearing (maintenance)
 - Each party pays for its requirements
- Pole replacement
 - “ Pay-per-use ” principle
 - Party requesting is prime for execution
 - Better compensation for asset owner
- Property split
 - Hydro - 61% / Bell - 39%



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Other considerations

- Effective January 1, 1997
 - Retroactive on various elements
- Duration of 5 years - renewable
- Sale of 75 K poles by Bell
- All revenues from those attached to Bell strand remitted to Bell
- Benefits of agreement to be considered as a whole



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What's in it for Hydro ?

- Reduction in volume of pole replacement
- Better utilization of space on the pole
 - Under some conditions, Bell may lower its attachments
- Fair recovery of costs on work executed at Bell's request



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What's in it for Bell ?

- Fair ownership split
- Better recovery of pole replacement costs at Hydro's request
- More appropriate line clearing financial arrangement
- Remittance of revenues from third parties on Bell's strand



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Conclusion

- Solid base for a better business relationship
- Willingness to embark on new joint ventures
 - Pole line design tool
 - Line transfer procedures
 - Pole yards optimization
- Incentive to a better asset utilization for both parties



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WIRELESS ATTACHMENTS TO TRANSMISSION STRUCTURES

JEAN HOWARD
Senior Attorney
Florida Power & Light Company
P.O. Box 029100
Miami, Florida 33102-9100
(305) 552-3929
jean_howard@fpl.com

WIRELESS POLE ATTACHMENTS

State & Local Government Issues

**Jean Howard, Senior Attorney
Florida Power & Light Company
305-552-3929
jean_howard@fpl.com**

WIRELESS POLE ATTACHMENTS

- **1996 TELECOMMUNICATIONS
ACT**
- **FCC RULEMAKING**
- **STATE DOTs**
- **LOCAL GOVERNMENT**
- **WHAT NEXT**

LOCAL GOVERNMENT ISSUES

- **BUILDING CODE ENFORCEMENT**
- **ZONING**
- **RIGHTS-OF-WAY ORDINANCES**
- **ADDITIONAL REVENUE**

ELECTRIC UTILITY ISSUES

- **Safety, Integrity of Utility Facilities**
- **FCC Rules**
- **Local Government Ordinances**
- **Public Relations**
- **Easement Rights**
- **Additional Revenues**

**TELECOMMUNICATIONS
ACT OF 1996**

- **§ 704 NATIONAL WIRELESS
TELECOMMUNICATIONS SITING
POLICY**
- **§ 703 POLE ATTACHMENT ACT**

§704 PROVISIONS

- **Availability of Federal Land**
- **Federal Preemption of EMF**
- **Preservation of Local Zoning**

**PRESERVATION OF LOCAL ZONING
AUTHORITY § 704(a)(7)(A)**

**“ Except as provided in this paragraph,
nothing in the Act shall limit or affect the
authority of a State or local government
. . . over decisions regarding the
placement, construction, and
modification of personal wireless service
facilities. ”**

**§704 LIMITATIONS ON LOCAL
GOVERNMENTS**

Can not:

- **Unreasonably discriminate among providers
of functionally equivalent services**
- **Prohibit or have the effect of prohibiting
service**

§704 LIMITATIONS ON LOCAL GOVERNMENTS (continued)

Must:

- **Act on request within reasonable time**
- **Have**
 - **Written reasons for denials of siting requests**
 - **Written record of substantial evidence**

FCC, STATE AND LOCAL GOVERNMENT AGREEMENT

- **LSGAC**
- **CTIA**
- **PCIA**
- **AMTA**

**FCC, STATE AND LOCAL GOVERNMENT
AGREEMENT (continued)**

- **180 day moratoria**
- **Continue to accept and process applications**

**FCC, STATE AND LOCAL GOVERNMENT
AGREEMENT (continued)**

- **Wireless to provide non-proprietary information requested by local governments**
- **Public participation encouraged**

**FCC, STATE AND LOCAL GOVERNMENT
AGREEMENT (continued)**

- **Informal non-binding dispute resolution process**
 - **LSGAC will publicize and promote moratoria guidelines**
 - **LSGAC will publicize and promote the dispute resolution process**

**FCC, STATE AND LOCAL GOVERNMENT
AGREEMENT (continued)**

- **LSGAC will publicize and promote the dispute resolution process**
- **Local government experts in land use siting of wireless facilities and industry representatives encouraged to assist in resolutions**
- **Non-binding**

**FCC, STATE AND LOCAL GOVERNMENT
AGREEMENT (continued)**

- **CTIA to withdraw without prejudice its petition seeking preemption of zoning moratoria**

FCC, STATE AND LOCAL GOVERNMENT

- **Local governments and wireless industry lobby for state legislation**
- **State and local agreement**

LOCAL GOVERNMENTS

- **Zoning - Tower Siting Ordinances**
- **Right-of-Way Use Ordinances**
 - **Control**
 - **Revenue**
- **Building Code Enforcement**

PRIVATE LANDOWNERS

- **Easement rights**
- **Aesthetics**
- **Fears of EMF**
- **Compensation**

§703 POLE ATTACHMENTS ACT 1996

- **Non-discriminatory access to utility poles, duct, conduit and rights-of-way**
- **Any attachment of a**
 - **cable television system**
 - **provider of telecommunications services**

§703 ATTACHMENTS ACT 1996 (continued)

- **FCC**
 - **Wireless carriers are entitled to benefits and protection of §703.**

§703 ATTACHMENTS ACT 1996
(continued)

- **FCC**
 - **Mandatory access to utility poles, duct, conduit, rights-of-way**
 - **Cable rates, pre-2001**
 - **Telecommunications rate phased in post 2001**

STATE DOTs

- **Radio towers**
- **Antenna attachments**
 - **monopoles**
 - **street lights**

STATE DOTs (continued)

- **Longitudinal installation of utilities on state highways**
 - **FHWA prohibited pre-1989**
 - **State discretion post 1989**

STATE DOTs - Minnesota

- **Operate Intelligent Transportation System**
- **Encourage deployment of statewide telecommunications networks**
- **Ensure access to state freeway is competitively neutral and non-discriminatory**
- **protect the traveling public**

STATE DOTs - Minnesota (continued)

- **RFP for design, construction, maintenance, repair, and operation of a fiber optic network and/or wireless communications facilities**

STATE DOTs - Minnesota (continued)

- **Developer awarded contract**
 - **exclusive access to state freeways**
 - **fiber optic system**
 - **lease out lit and unlit fiber**
 - **non-discriminatory basis**
 - **exclusive negotiations for access to state freeways for wireless**

STATE DOTs - Minnesota (continued)

- **Declaratory Action before FCC**
- **Minnesota Telephone Association**
 - **barrier to entry**
 - **unbalances legal and regulatory framework**
 - **increase cost by requiring indirect routing**
 - **coerces others to use facilities**

REMOVAL OF BARRIERS TO ENTRY § 253

- **(a) No State or local statute or regulation or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.**

REMOVAL OF BARRIERS TO ENTRY
§ 253 (continued)

- **(b) State Regulatory Authority. - Nothing in this section shall affect the ability of a State to impose, on a competitively neutral basis . . . requirements necessary to preserve and advance universal service, protect the public safety and welfare; ensure the continued quality of telecommunications services and safeguard the rights of consumers.**

REMOVAL OF BARRIERS TO ENTRY
§ 253

- **(c) Nothing in this section affects the authority of a State or local government to manage the public rights-of-way or to require fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis for use of public rights of way on a non-discriminatory basis, if the compensation required is publicly disclosed by such government.**

WIRELESS POLE ATTACHMENTS

AN EXCITING IDEA

WIRELESS POLE ATTACHMENTS EXCITING IDEA

- **Cited for Code Violations in three counties**
- **Landowners claim violation of easement**

LOCAL GOVERNMENT VIEW

- **An attachment of a wireless antenna to an electric pole transforms that pole into a telecommunications tower**

UTILITY VIEW

- **An electric pole with an antenna attachment is still an electric pole**
 - **in-line pole**
 - **necessary for electric transmission**
 - **constructed under electric pole design criteria**

LOCAL GOVERNMENT: CODE ENFORCEMENT

- **VIOLATION OF BUILDING CODE**
- **FAILURE TO OBTAIN SPECIAL EXCEPTION**
- **UNAUTHORIZED USE WITHIN A DISTRICT**

BUILDING CODE VIOLATION

- **Utility must obtain building permits**
- **Utility pole design must be approved by local government**
- **Utility pole construction must be approved by local government inspectors**
- **NEC applies to electric poles**

**BUILDING CODE VIOLATION
(continued)**

**“UNLAWFULLY ERECTING A
TELECOMMUNICATIONS TOWER
WITHOUT FIRST OBTAINING A
BUILDING PERMIT AS REQUIRED
UNDER SECITON 301 OF THE . . .
BUILDING CODE.”**

**BUILDING CODE VIOLATION
(continued)**

- **Is an electric pole a “structure” within the local government building code?**

BUILDING CODE VIOLATION
(continued)

- **Section 4502.1 of Code expressly adopts the National Electric Code (NEC), NFPA 70.**
- **Communication equipment and electric installations , such as poles, are expressly excluded from NFPA 70 under sections 90-2(b)(4) and (5) .**

BUILDING CODE VIOLATION
(continued)

- **Stated purpose of Building Code:**
 - **Safety**
- **State statute gives state PSC exclusive jurisdiction over safety issues of electric utility**

BUILDING CODE VIOLATION

(continued)

- **State Public Service Commission has exclusive jurisdiction to prescribe and enforce safety standards for transmission and distribution facilities.**
- **“Administrative authority” referred to in the NESC is the PSC.**

BUILDING CODE VIOLATION

(continued)

- **Engineering reasons:**
 - **the pole (“structure”) is outside the scope of the Building Code**
 - **an electric pole is designed under different codes and criteria**

Electric Pole Design

- **Essential function of pole is to support transmission lines**
- **Even if a street light or antenna is attached, 75 to 80 percent of the pole capacity sustains the windloading requirements induced by the electric transmission line.**

Electric Pole Design (continued)

- **A stand alone telecommunications tower is designed on a different set of criteria than the design criteria for an electric transmission pole, i.e., “Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.”**

**ZONING ISSUES:
WHICH LAW APPLIES?**

- **STATE**
- **FEDERAL**
 - 703
 - 704
- **LOCAL GOVERNMENT**
- **ELECTRIC UTILITY SITING LAWS**

LOCAL GOVERNMENT ORDINANCES

- **Rights- of-Way Construction and Administration**
- **Placement of Telecommunications and Open Video System Providers Regulation and Use of and Occupancy of Rights-of-Way**
- **Telecommunications Towers Siting**

TELECOMMUNICATIONS TOWERS SITING

- **Attachment to an electric pole**
 - **stealth**
 - **monopole**
 - **antenna support structure**
 - **other**

TELECOMMUNICATIONS TOWERS SITING (continued)

- **Requirements**
 - **special exception, public hearings**
 - **setbacks**
 - **landscaping; buffering**
 - **approval by community appearance board**
 - **maintenance bond**

CONCLUSION

- **STILL AN EXCITING IDEA**
- **WIRELESS ATTACHMENTS ARE PROLIFERATING**

CONCLUSION (continued)

- **FCC AND LOCAL GOVERNMENTS ARE HINDERING DEPLOYMENT OF WIRELESS POLE ATTACHMENTS**
- **INCREASE IN LITIGATION**

CONCLUSION(continued)

- **LEGISLATIVE REVISIONS ARE NEEDED AT THE FEDERAL AND STATE LEVELS**
 - **An attachment to an electric pole does not turn that pole into a telecommunications tower subject to local building codes or zoning**
 - **Not subject to FCC rate regulation**

TELECOMMUNICATIONS ACT UPDATE

SHIRLEY FUJIMOTO
Attorney at Law
McDermott, Will & Emery
600 13th Street N.W.
Washington, DC 20005-3096
(202) 756-8282 Phone
(202) 756-8087 FAX
sfujimoto@mwe.com

National Joint Use Conference Pole Attachments: The Next Generation

Galt House
Louisville, Kentucky

October 26, 1998

The Pole Attachments Act After 1996: Federal Legal and Regulatory Issues

Shirley S. Fujimoto
McDermott, Will & Emery
600 13th Street, N.W.
Washington, D.C. 20005
(202)756-8282
Fax: (202)756-8087
e-mail: sfujimoto@mwe.com

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Federal Versus State Regulation

- Any state may preempt the FCC's oversight by declaring that:
 - ◆ The State regulates rates, terms, and conditions of pole attachments; and
 - ◆ The State has the authority to consider and does consider the interests of CATV subscribers as well as utility consumers
- Eighteen states and the District of Columbia have preempted FCC regulation of pole attachments within their borders

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Federal Pole Attachment Law: 1978-1996

- ◆ During the period between 1978 and 1996, Congress made only minor changes to the Pole Attachments Act
- ◆ In 1996, as part of the Telecommunications Act of 1996, Congress made major changes to the Pole Attachments Act
 - Emphasized the importance of negotiations in establishing the rates, terms and conditions governing attachment to utility distribution infrastructure
 - Allowed telecommunications carriers, except incumbent LECs, to attach
 - Provided for a new telecommunications carrier rate that allows utilities to recover costs associated with usable and unusable space
 - Included nondiscriminatory access provisions
 - Clarified that the pre-existing cable rate formula applies to attachments used for cable services only

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FCC Implementation of the Amendments to the Pole Attachments Act

- 1996 Act took effect on February 8, 1996
- The FCC had a duty to promulgate by February 8, 1998 regulations to govern post-2001 pole attachments
 - ◆ Post-2001 Pole Attachment Rate Rulemaking
 - ◆ Pre-2001 Pole Attachment Rate Rulemaking
 - ◆ Interconnection Rulemaking
 - ◆ Selected Complaint Cases

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FCC Pole Attachment Rate Rulemakings

- **Pre-2001 Pole Attachment Rate Rulemaking (CS Docket No. 97-98)**
 - ◆ To establish regulations applicable to attachments by pure cable companies and telecommunications carriers until February 8, 2001
 - FCC Decision Pending
- **Post-2001 Pole Attachment Rate Rulemaking (CS Docket No. 97-151)**
 - ◆ Established regulations applicable to attachments by hybrid cable entities and telecommunications carriers after February 8, 2001
 - FCC Report & Order Released on February 6, 1998
 - Petitions for Reconsideration pending before the FCC
 - Court Review pending in the Eleventh Circuit

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Who is a Telecommunications Carrier

- The 1996 Act defines a telecommunications carrier as one that offers telecommunications for a fee directly to the public ... regardless of the facilities used
 - ◆ Includes:
 - Cable Companies that Provide Telecommunications Services
 - Long Distance Carriers
 - CLECs
 - CAPs
 - Wireless Carriers
 - ◆ Excludes:
 - ILECs (excluded by statute)
 - Internet Service Providers

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What Constitutes an Attachment?

- **Attachments used to carry telecommunications carrier or cable television company traffic:**
 - ◆ **wireline attachments**
 - ◆ **wireless attachments**
 - ◆ **overlashed attachments**
- **Does not include non-telecommunications or cable attachments such as governmental streetlights or traffic signs, or electric wires**

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Application of § 224 to Wireless Antenna Attachments

The FCC found that wireless attachments are covered by § 224 and rates for such attachments will be determined by the FCC on a case-by-case basis when the parties fail to reach a negotiated rate

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Application of § 224 to Wireless Attachments: Reconsideration and Court Appeal

- **Electric utilities argue that the FCC should not have adopted rules governing wireless attachments**
 - ◆ Section 224 does not apply to wireless attachments, thus the rates for such attachments are never subject to FCC regulation
 - ◆ The characteristics of wireless attachments do not fit the wireline pole attachment formula
 - ◆ The FCC did not provide sufficient notice that it was considering wireless attachment issues in the rulemaking
 - ◆ The wireless siting market is competitive, thus wireless attachments to utility property do not need to be regulated
- **Entities such as Teligent and Winstar argue that wireless attachments are covered**

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Application of § 224 to Overlapping

- **The FCC found that overlapping is a pole attachment**
 - ◆ Overlapping is an important tool for facilitating one goal of the 1996 Act – promoting competition
 - ◆ Pole owners, therefore, must permit overlapping in certain circumstances and on certain terms
 - ◆ FCC distinguishes between two types of overlapping
 - Overlapping by an attaching entity over its existing attachments
 - Overlapping by third parties over an existing “host” attachment

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Overlapping by an Attaching Entity

- ◆ Pole owners must permit existing attaching entities (cable and telecommunications providers) to overlap their own attachments
- ◆ Pole owners cannot charge an additional fee if the overlapped attachment does not significantly increase the burden on the pole
- ◆ If overlapping does increase the burden on the pole, a pole owner may deny access for reasons of safety, reliability and generally applicable engineering principles
- ◆ The FCC deferred deciding whether a pole owner can charge an additional fee for overlapping if the overlapping adds to the burden on the pole
- ◆ The FCC found that overlapping does not consume additional usable space (only the 1 foot occupied by the host)
- ◆ The FCC did not decide whether notice, permits or an attachment agreement were preconditions to overlapping by an existing entity

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Overlapping by a Third Party

- Pole owners must permit third-parties to overlap their facilities over the existing attachments of other attaching entities
- Third parties are assumed to share usable space of host attacher (1-foot presumption), but are required to share in the costs of unusable space
- Third parties are counted as attaching entities for purposes of allocating the costs associated with unusable space
- Third parties must have an agreement with the pole owner and host to overlap

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Application of § 224 to Overlapping: Reconsideration and Court Appeal

- **Electric utilities argue overlapping must be subject to a full attachment rate paid to the pole owner**
- **The failure of the FCC to provide compensation to the pole owner constitutes an unconstitutional taking of property**

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Application of § 224 to Overlapping: Reconsideration and Court Appeal

- **MCI is arguing that the host attachor is now a utility subject to the Pole Attachments Act and must allow overlapping on a non-discriminatory basis**
- **SBC argues that § 224(d) is not applicable if a pure cable attachment is overlapped by a facility used to carry non-cable traffic (e.g. § 224(e) would apply to a cable host attachment overlapped by a telecommunications attachment)**

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Application of § 224 to Cable Attachments Used to Carry Telecommunications Traffic

- **The FCC found that cable company attachments used to carry telecommunications traffic will be subject to a telecommunications carrier attachment rate**
- **When the parties fail to agree on a negotiated rate:**
 - ◆ **Pre-2001: Section 224(d) applies**
 - ◆ **Post-2001: Section 224(e) applies, making the cable company responsible for sharing the cost of unusable space for such attachments**

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Application of § 224 to Cable Attachments Used to Carry Internet Traffic

The FCC found that cable company attachments that carry commingled cable and internet traffic will be subject to § 224(d) rate

The FCC declined to categorize internet service as either a telecommunications or cable service

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**Application of § 224 to Cable Attachments Used
to Carry Telecommunications or Internet Traffic:
Reconsideration and Court Appeal**

**Bell Atlantic, MCI, SBC and USTA argue that
the FCC should reconsider its decision to rely
on § 224(d) to derive a rate for attachments
that commingle cable and non-cable services
(including internet services)**

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**Application of § 224 to Cable Attachments Used
to Carry Telecommunications or Internet Traffic:
Reconsideration and Court Appeal**

- **Electric utilities argue that attachments used to
carry internet services are not covered by § 224**
 - ◆ **FCC lacks jurisdiction to regulate such attachments**
 - ◆ **Market rates apply to such attachments**

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Issues Relating to the FCC's Post-2001 Rate Formula for Poles

- **Congress mandated that the rates, terms and conditions governing telecommunications carrier attachments should be determined through negotiations**
 - ◆ **The FCC was given jurisdiction to resolve disputes over rates when the parties fail to agree**
 - ◆ **The FCC affirmed its preference for negotiations, but established a rate formula that it would use to derive attachment rates in the case of disagreements**
 - ◆ **The FCC has deferred to its pre-2001 rate rulemaking any determination on what elements would be included in such a rate calculation**

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Issues Relating to the FCC's Post-2001 Rate Formula for Poles

- **New formulas allow pole owners to recover from telecommunications carriers the costs associated with unusable space**
- **FCC confirmed its presumption that the average usable space on a pole is 13'6"**
- **FCC confirmed its presumption that space occupied by an attachment is one foot**
- **FCC deferred decision on other formula elements (e.g., accounts, historic versus forward-looking costs) to the pre-2001 rate rulemaking**

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Application of § 224 to Telecommunications Carrier Attachments and Unusable Space

- Unlike pure cable entities, telecommunications carriers share in the costs associated with usable and unusable space
- To allocate the costs of unusable space, the following entities are counted as attaching entities:
 - ◆ Pure Cable Companies
 - ◆ ILECs
 - ◆ Other Telecommunications Carriers (IXCs, CAPs, CLECs, Wireless)
- Allocation is based on the number of entities, not on the number of attachments or space consumed

McDERMOTT, WILL & EMERY

Application of § 224 to Telecommunications Carrier Attachments and Unusable Space: Reconsideration and Court Appeal

- Counting attaching entities for purposes of allocating the costs of unusable space
 - ◆ ICG and MCI argue that electric utilities should be counted as attaching entities because conductors are attachments
 - ◆ SBC argues that ILECs should not be counted as attaching entities when they own the pole
 - ◆ SBC asks that the FCC clarify that governmental entities are counted only when their attachments are used to provide cable television service or common carrier telecommunications service

McDERMOTT, WILL & EMERY

Implementation

- The new rate formulas come into effect on February 8, 2001 for telecommunications carrier attachments on a pole as of that date; § 224(d) applies prior to this date
- Any resulting rate increase is phased-in over 5 years
- The FCC's rulings on overloading, wireless attachments and rights-of-way appear to be effective immediately

McDE MOTT, W LL & E RRY

ALLOCATION OF SPACE/COST

ROBERT LEGATO
Representing Bellcore
236 St. David's Drive
Mt. Laurel, NJ 08054
(609) 642-0970 Phone
(609) 727-7827 FAX
Boblegato@msn.com

POLE COST ALLOCATION

THE FCC'S RULES AND THEIR IMPACT ON RATES

BELLCORE-10/26/98-BOB LEGATO

“TA 96”

- WHAT IT SAID
- HOW IT WAS IMPLEMENTED
- WHAT THAT MEANS
- WHEN IT HAPPENS

WHAT TA96 SAID

- “JUST, REASONABLE AND NON-DISCRIMINATORY RATES”
- BY 2/8/98, FCC WILL ESTABLISH RULES TO GOVERN CHARGES FOR POLE ATTACHMENTS

WHAT THE FCC DID

- MADE THE DATE!
- CHARGES WILL BE THE SUM OF TWO COSTS:
 - 1) A PORTION OF THE USABLE SPACE PLUS
 - 2) A PORTION OF THE COMMON (“OTHER-THAN-USABLE”) SPACE

WHAT DOES THAT MEAN?

- ALLOCATE COST OF USABLE SPACE ACCORDING TO PERCENTAGE OCCUPIED BY EACH ENTITY
- ALLOCATE $\frac{2}{3}$ OF COST OF COMMON SPACE EQUALLY AMONG ALL ATTACHERS
- ADD THOSE TWO, AND THAT'S THE CHARGE FOR EACH ATTACHER!

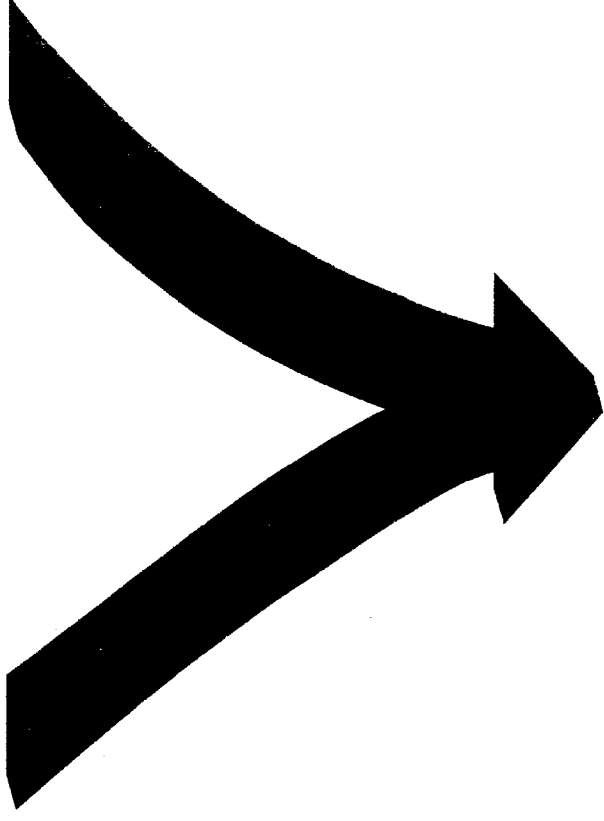
YEAH, SWELL...

WHAT DOES THAT MEAN IN
THE REAL WORLD, IN PLAIN
ENGLISH?

BELLICORE-10/26/98-BOB LEGATO

COST ALLOCATION

- USABLE SPACE
COST PER YEAR?
- COMMON SPACE
COST PER YEAR?
- USABLE X % USED
- 2/3 COMMON
DIVIDED BY # OF
ATTACHERS
- ADD 'EM UP!



ANNUAL COST OF A POLE

TOTAL DEPRECIATED POLE INVESTMENT

TOTAL POLES IN FIELD

X ANNUAL % RATE

BELLCORE-10/26/98-BOB LEGATO

COST OF USABLE SPACE

TOTAL USABLE SPACE
TOTAL POLE LENGTH
X ANNUAL COST OF POLE

BELLCORE-10/26/98-BOB LEGATO

COST OF COMMON SPACE

TOTAL COMMON SPACE
TOTAL LENGTH OF POLE
X ANNUAL COST OF POLE

BELLCORE-10/26/98-BOB LEGATO

ANNUAL COST OF A POLE

- POLE OWNER CALCULATES WHAT IT SPENDS ANNUALLY TO HAVE ALL POLES IN THE FIELD.
- DIVIDES BY DEPRECIATED POLE INVESTMENT
- = ANNUAL POLE COST %
- % X COST OF ONE POLE= “ANNUAL COST OF A POLE”

BELLCORE-10/26/98-BOB LEGATO

POLE COST EXAMPLE

- POLE OWNER CALCULATES IT SPENDS 25% PER YEAR TO KEEP POLES IN FIELD
- THIS 40' POLE HAS DEPRECIATED VALUE OF \$400.
- $25\% \times \$400 = \100

CATV ATTACHMENT

ANNUAL COST OF POLE?
HOW MUCH USABLE SPACE?
HOW MUCH COMMON SPACE?

BELLCORE-10/26/98-BOB LEGATO

COST OF USABLE SPACE

- TOTAL USABLE ON THIS 40' POLE:
 - ELCO(8) + TELCO(2) + CATV(1) = 11' - 0"
 - CATV PORTION = 1/11
 - COST OF USABLE SPACE:
 - 11/40 X \$100 = \$27.50
 - CATV PORTION:
 - 1/11 X \$27.50 = \$2.50
- PLUS--**

COST OF COMMON SPACE

- TOTAL COMMON SPACE ON THIS 40' POLE:
 - 40'-0" minus (11'-0") = 29'-0"
- EACH ATTACHER IS CHARGED:
 - $\frac{2}{3} \times (29/40 \times \$100) = \$16.11$
3 (attachers)

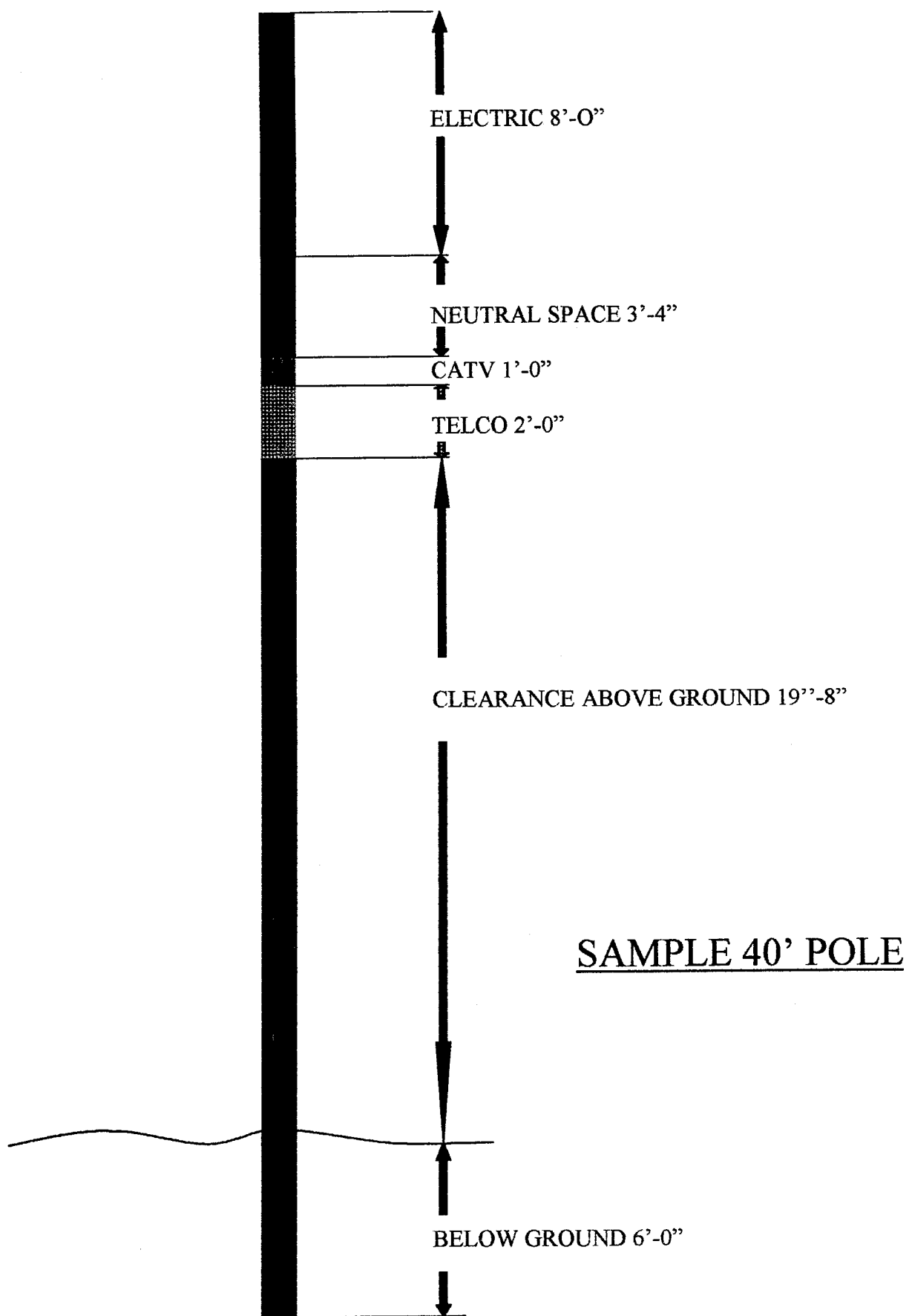
CATV RATE

- USABLE PLUS COMMON SPACE
- $\$2.50 + 16.11 = \18.61

“WHEN IT HAPPENS”

- NO INCREASES (CHANGES) IN RATES WILL TAKE EFFECT FOR FIVE YEARS FROM 2/8/96: FEBRUARY 8, 2001
- INCREASES WILL BE PHASED IN OVER A FIVE YEAR PERIOD: 20% PER YEAR; FULL EFFECT OF FCC RULES:

FEBRUARY 8, 2006



DAY TWO MODERATOR

MARIE PIPER
BellSouth Telecommunications
22C45 BellSouth Center
675 West Peachtree Street
Atlanta, GA 30375
(404) 927-8631 Phone
(404) 523-2378 FAX
marie.h.piper@bridge.bst.bls.com

MANAGING COMBINED ENGINEERING FOR MAKE-READY WORK

**TOM JACKSON
Georgia Power Company
241 Ralph McGill Boulevard, N.E.
Atlanta, GA 30308-3374
(404) 506-2428 Phone
(404) 506-3280 FAX**

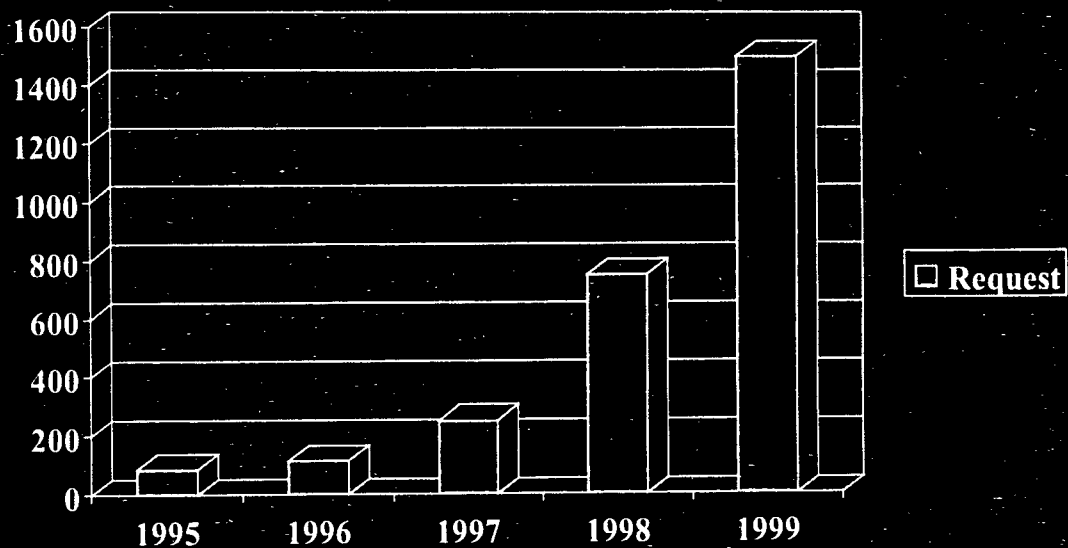
*Managing Combined
Engineering for Make Ready
Work*

Tom Jackson
Georgia Power Company
A Southern Company

Telecommunications Act of 1996

Delay in new companies entering the business

Request for use of existing access



Managing Request

- Requirement for Nondiscriminatory Access

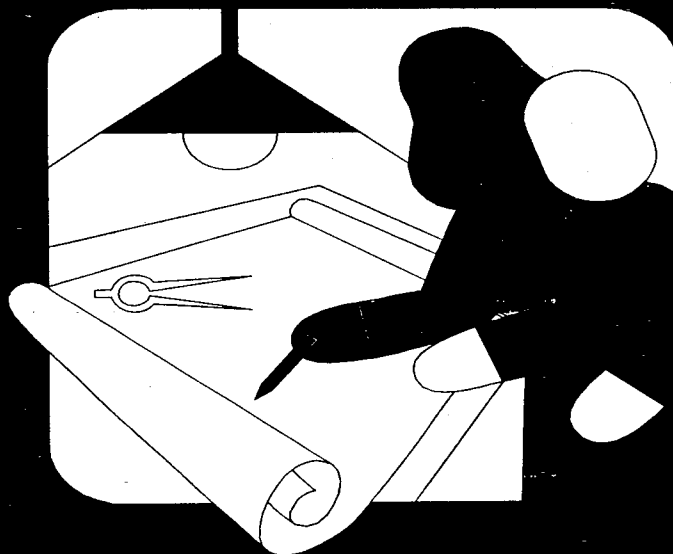
Request for same routes



*Estimate for Make ready expenses,
who is responsible for what cost?*

- Ride out of proposed routes, must know who else we are dealing with. Eight companies request same route in Atlanta

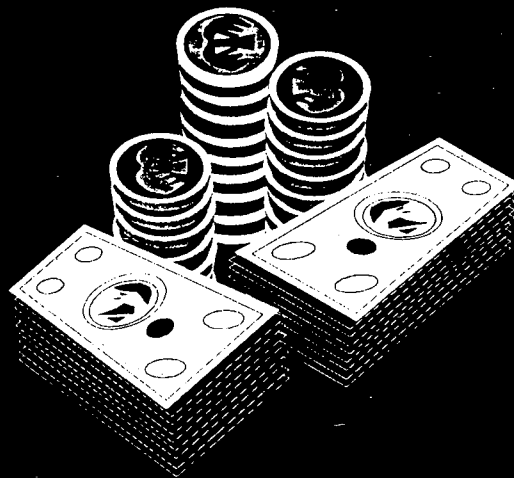
*Limited Engineering, Estimating,
and construction resources*



*Contract out Management and
Make ready*



*Companies using assets
responsible for cost*



One company manage request and inspection process

- Separate company prepares estimates to determine make ready work that is necessary

Managing Company

- Ensure all request are handled in order.
- Ride route with requesting company to determine if others are using same route
- Inspection of construction.

Engineering and estimating

- Inspect poles in the field to determine work that is necessary (Coordinate with all utilities)
- Prepare Construction drawing for use by our crews (may also prepare work for use by attaching company's crews)
- Prepare work order and close out when completed

Construction inspection

- Are anchors installed correctly and before the pulling of strand?
- Does construction company have construction drawings?
- Are the facilities installed per agreement?
- Are there any code violations?

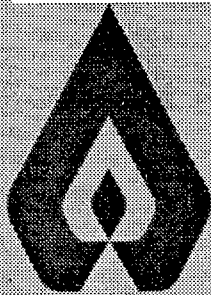
Win/Win



**RIGHT OF WAY USE AND DEREGULATION
OF THE NATURAL GAS INDUSTRY**

**BOB GARDNER
Atlanta Gas & Light Company
P.O. Box 4569
Atlanta, GA 30302
(404) 584-3963
rgardner@mindspring.com**

*Right-of-Way Use and
Deregulation of the Natural Gas
Industry in Georgia*



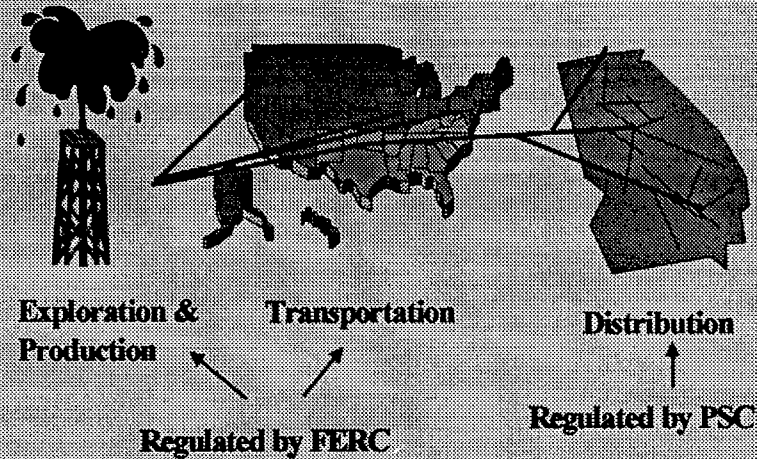
**National Joint Use Conference
Louisville, Kentucky**

**Bob Gardner
Atlanta Gas Light Company
October 1998**

An Overview of this Presentation

- The Natural Gas Industry
- Atlanta Gas Light Company
- The New Law
- Deregulation Timeline
- Full Competition
- Possible R/W Impacts
- Challenges of the Process

The Natural Gas Industry



The Natural Gas Industry

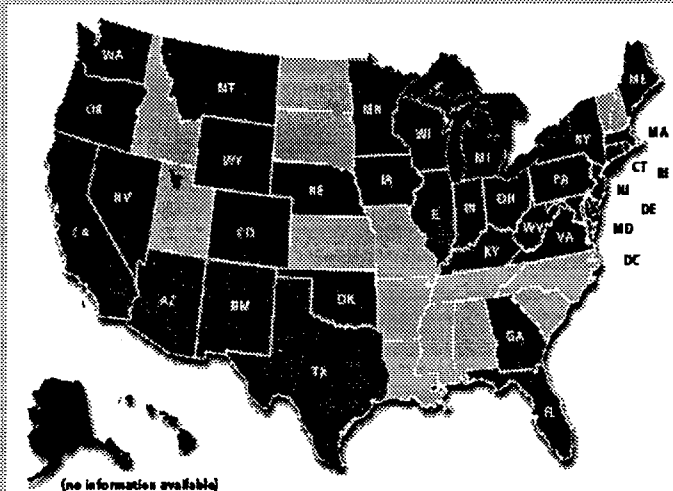
- 1978 - Natural Gas Policy Act initiates changes regarding deregulation at the wellhead.
- 1985 - FERC Order 436 outlines separation of pipelines' merchant and transportation functions.
- 1989 - Natural Gas Wellhead Decontrol Act lifts all remaining wellhead price controls.

The Natural Gas Industry

- 1992 - FERC Order 636 orders interstate natural gas pipelines to “unbundle” gas sales, transportation and storage services to initiate competition.
- 1995 - The first residential natural gas customer choice programs begin.

The Natural Gas Industry

- Today many states have a residential customer choice program being finalized or implemented. (AGA)



The Natural Gas Industry

- Nationwide, most industrial natural gas is sold to the customer by a non-utility supplier.
- By 2000, AGA estimates 60% of all commercial customers will buy natural gas from a non-utility supplier.



Atlanta Gas Light Company



- Principal subsidiary of AGL Resources.
- Largest S.E. natural gas distribution company.
- Serves more than 1.4 million customers.



Atlanta Gas Light Company

- Purchases natural gas from producers and arranges for its transportation.
- Sells and distributes it to customers.
- Constructs and maintains the distribution network of pipes.
- Handles all customer contact issues.

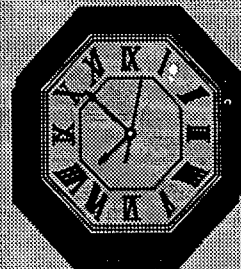
The New Law

- The *Natural Gas Competition and Deregulation Act* signed into law, April 1997.
- Outlines the rules for competition and choice with the intent of benefiting our customers.
- Makes deregulation *optional*, but companies can elect to participate by following specific criteria.



Deregulation Timeline

- 11/97 - AGLC files with PSC to unbundle its services.
- 6/98 - PSC approves AGLC's request.
- 7/98 - Deadline for Marketers to apply to PSC.
- 10/98 - List of certified marketers published by PSC.



Deregulation Timeline

11/98 - *Customers can begin buying gas from 19 marketers certified by PSC.*



Columbia Energy Services
Duke Energy Marketing
Energy America
e prime, inc.
FPL Energy Services
Gas Key
Georgia Natural Gas Services
Infinite Energy Inc.
NorAm Energy Management
PanCanadian Energy Services

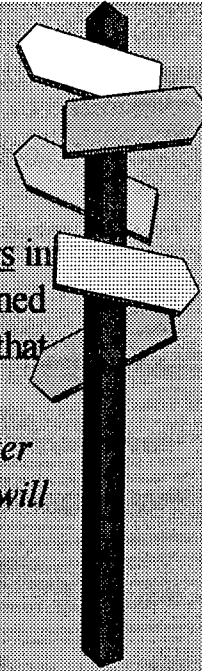
Peachtree Natural Gas
Phelts Natural Gas Associates
SCANA Energy Marketing
Shell Energy Services Co.
United Gas Management of GA
UtiliCorp Energy Solutions
Valdosta Natural Gas Services
Volunteer Energy Services
Williams Energy Services

Deregulation Timeline

- **Phase II** - After one-third of all customers in any of the nine regional markets have signed up with a marketer, the PSC will declare that market competitive.

Customers who haven't selected a marketer will have 100 days to choose one or they will be randomly assigned.

- **Phase III** - Full Competition



Full Competition



Atlanta Gas Light Company

- Distributes gas for the certified marketers.
- Constructs and maintains the pipe distribution network and *becomes a pipes company*.
- Handles emergency calls and repairs.

Full Competition



Certified Marketers

- Sell gas to customers, offer billing and possibly meter reading services.
- Offer creative products & services
 - Various billing options
 - Promotional offers and incentives
 - Internet access, home security, etc.
- Handle all customer contact issues.

Possible Right-of-Way Impacts

- Pipe Systems
- Meters
- Customer Service
- DOT Operations



Possible Right-of-Way Impacts

Pipe Systems

- At this time, the law does not allow companies to propose or operate parallel pipe systems.



Possible Right-of-Way Impacts

Pipe Systems

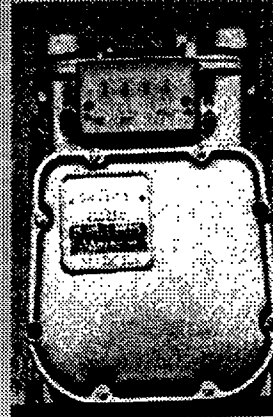
- Possibility of new pipe systems in areas not served by AGLC present an unknown impact.



Possible Right-of-Way Impacts

Meters

- AGLC may continue to *own* the meters but marketers can *read* the meters if they choose.
- New communication lines may have to be installed for remote or electronic reading
- Marketers can petition the PSC to own or install meters.



Possible Right-of-Way Impacts

Customer Service

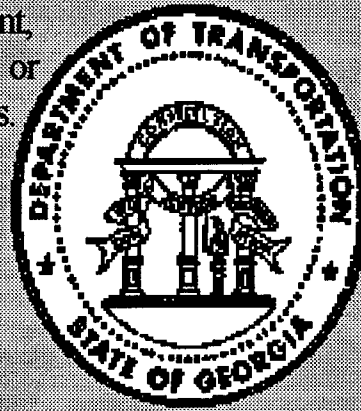
- *Call Before You Dig Law* will not be affected.
- AGLC's dispatch operations should not change.
- Marketers will be new "customers" of AGLC.



Possible Right-of-Way Impacts

DOT Operations

- We expect NO impact related to permits, plan development, construction, maintenance, or other right-of-way activities.
- DOT will continue to work with us, *not* the marketers.



Challenges of the Process

- Will competition work as expected?
- How long will it actually take?
- Will the trend towards natural gas and electric company mergers affect the process?



For more information...

- Atlanta Gas Light Company

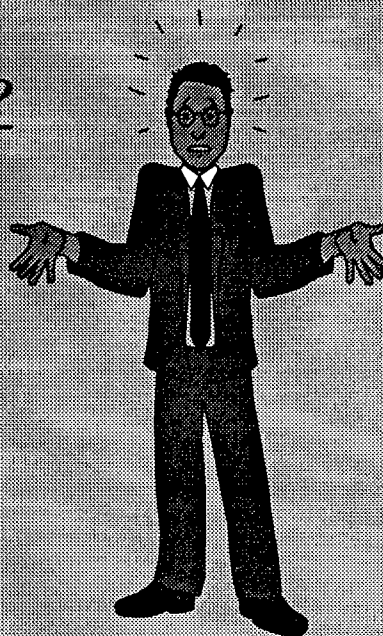
www.aglc.com

- American Gas Association

www.aga.com



Any Questions?



IMPACT OF TEA-21 ON UTILITIES

**PAUL SCOTT
Highway Engineer
Office of Engineering (HNG-10)
Federal Highway Administration
400 Seventh Street, SW., Room 3134
Washington, D.C. 20590
(202) 366-4104 Phone
(202) 366-3988 FAX
paul.scott@fhwa.dot.gov**

EFFECT OF TEA-21 ON UTILITIES

TEA-21 (Transportation Equity Act for the 21st Century)

- Public Law 105-178
- Signed into Law on June 9, 1998
- 6-Year Program (1998-2003)
- \$198 - \$217 Billion
- Key Elements
 - Rebuilding America
 - Improving Safety
 - Protecting the Environment
 - Creating Opportunity

Impact of TEA-21 on Utilities

- Record Investment
 - More Money for Highways
 - More Highway Projects
 - More ROW Needed (Especially in Urban Areas)
 - More Utility Relocations
- Expanded Highway Programs

PROGRAM	TEA-21 (Billion \$\$)	ISTEA (Billion \$\$)
National Highway System (NHS)	28.6	21.0
Interstate Maintenance (IM)	23.8	17.0
Surface Transportation Program (STP)	33.3	23.9
Bridge Replacement (BR)	20.4	16.1
Congestion/ Air Quality (CMAQ)	8.1	6.0
High Priority	9.4	6.2
Federal Lands	4.1	2.6
Transit	41.0	31.5

- **ITS (Intelligent Transportation Systems)**
 - \$1.2 Billion for ITS plus eligibility under NHS, STP, CMAQ
 - Continued emphasis on ITS means more Resource Sharing activities (i.e., more shared fiber optic lines and wireless telecommunications facilities on highway ROW to provide ITS infrastructure).
- **Highway Safety**
 - Must be considered in overall Planning Process
 - 10% STP set-aside for HE & RR programs
 - More emphasis on utility pole safety
 - Utility Safety Task Group established. [First meeting on 10/28/98. Dr. Don Ivey, Chair & Paul Scott, Vice-Chair]
- **Utility Damage Prevention (One Call Notification)**
 - Seed Money in TEA-21 to Establish or Improve State Notification Programs
 - More FHWA emphasis on One Call Notification Programs
 - Continued FHWA emphasis on Subsurface Utility Engineering
- **GAO Study**
 - Congressionally mandated study on Impact of utility delays on the delivery & cost of Federal-Aid Projects. The study is to include:
 - Methods used to mitigate delays (Courts)
 - Use of incentives/penalties
 - Use of available technologies, particularly subsurface utility engineering.
 - Contractor compensation

**ENGINEERING PROCEDURES REQUIRED
FOR THIRD PARTY ATTACHMENTS**

**GLENN DAVIS
Conectiv
New Castle Regional Office
I-95 & Route 273
P.O. Box 9239
Newark, DE 19714-9239
(302) 454-4385 Phone
(302) 454-4034 Fax
glenn.davis@conectiv.com**

ENGINEERING PROCEDURES FOR THIRD PARTY ATTACHMENTS

GOAL OF COVERED SUBJECTS:

- What are third party attachments?
- Reviewing typical aerial pole lines.
- What factors are considered in the design of any pole line?
- Overlashing may be restricted causing make-ready work as per the NESC.
- Non-notification to the pole owner for any attachment violates the NESC and is considered by the pole owner an unauthorized attachment.
- Concerns using aerial duct.
- Typical Electric Utility Underground Cables.

THIRD PARTY ATTACHMENTS – Review

CLEARANCES – Review

DESIGN CONSIDERATIONS REQUIRED OF POLE OWNERS

- NESC – practical safeguarding of persons during the installation, operation, or maintenance of electric supply and communication lines and associated equipment (Section 1, NESC).
- Grades of Construction (Section 24, NESC) B-1.
 - Grade B – Minimum requirement for Transmission Facilities, minimum required for distribution angle poles (NESC Rules 261 D & F).
 - Grade C – Minimum requirement for Distribution Facilities.
 - Grade N – minimum requirement for Communications Facilities.
- Safety Factors (Section 26, NESC)
 - Design Loading Conditions for CONECTIV
 - ½ inch Radial thickness of Ice.
 - 4 lb./sq. ft. Horizontal Wind Pressure
 - 0 Degree F.
 - Safety Factors for Wood Poles
 - Safety Factor = NESC Overload Factor / NESC Strength Factor
 - NESC Table 253-1 and 261-1A.
 - Safety Factors for Pole Foundations
- Pole Strength
 - The NESC requires that a safety factor must be applied to loadings. The sum of the working moments multiplied by appropriate safety factors **MUST NOT EXCEED** the ground line ultimate moment for the pole in question.

- Factors that must be considered:
 - Transverse wind loading on the pole.
 - Transverse wind loading on equipment mounted on the pole.
 - Transverse wind loading on EACH conductor attached to the pole.
 - Force due to change in direction
- Anchors and guys.
- Poles exceeding 65 feet require special attention for wind loadings.
- Pole Setting Depth
- Pole Strength at Levels other than Ground Line
- Review Pole Class Calculation (B-11)
- Review Setting Depth

REVIEW ACTUAL POLE IN FIELD ASSUMING A REQUEST FOR AN ATTACHMENT HAS BEEN MADE.

- Primary Maps
- NESC Clearance requirements
- Sags (E-71.2)
- DelDOT Utilities Design Manual (12/27/95)
- Two Example Poles

OVERLASHING CONCERNS

- Pole owner needs to be notified
- Pole strength needs to be calculated
- Clearance requirements may have changed where make-ready work needs to be completed prior to overlashing.

AERIAL DUCT – CAUTION

- Electric Distribution Poles are sensitive to vibration.
- Slides showing what vibration does.

UNDERGROUND CABLE SYSTEMS

- Cable sizes & conduit sizes.
- Does not use interduct.

Example Pole Class Calculation

Pole Length	45'
Normal Setting Depth	$(10\%+2) = 6.5'$
Construction Standard	L-3002 (Tangent Pole with 3 Pot Bank)
Construction Grade	C
Phase Conductors	477 AAC (3) @ Pole Top
Neutral Conductors -	1/0 ACSR/AW 12' Down From Top
Communications Conductors	Total of 14" (Sum of Diameters) 15' from top
Ruling Span	250'
Adjacent Spans	250', 300'

What class pole should be installed?

Step 1. Working moment due to wind on pole = 2600 ft-lb. from table B3.

Step 2. Working moment due to wind on equipment. Per construction standard L-3002, 3 pot bank, assume large transformers, 3' up from neutral.
75 lb. (per table B4) $\times 29.5'$ = 2212 ft-lb.

Step 3. Working moment due to wind on conductors:

$$\begin{aligned}
 477 \text{ AAC Diameter} &= 0.793 & K &= 0.60 \text{ lb/ft.} \\
 1/0 \text{ ACSR/AW Diameter} &= 0.398 & K &= 0.47 \text{ lb/ft.} \\
 \text{Communications Conductors: Total of 14" (sum of diameters)} \\
 K &= \frac{D+1}{3} = 5 \text{ lb./ft.}
 \end{aligned}$$

$$477: \quad 3 \times 0.60 \times \frac{(250+300)}{2} \times 38.5' = 19,057 \text{ ft/lb.}$$

$$1/0: \quad 1 \times 0.47 \times \frac{(250+300)}{2} \times 26.5 = 3,425 \text{ ft/lb.}$$

$$\text{Comm:} \quad 5 \times \frac{(250+300)}{2} \times 23.5' = 32,312 \text{ ft/lb.}$$

$$\text{Total} \quad 54,794 \text{ ft/lb.}$$

Step 4. Working moment due to line angle = 0 (Tangent Pole, No Angle)

Step 5. Total working moment due to wind:

Wind on Pole:	2600 ft/lb.	From Step 1
Wind on Equipment:	2212 ft/lb.	From Step 2
Wind on Wire:	54,794 ft/lb.	From Step 3
Total =		59,606 ft/lb.

DRAWINGS	DEVELOPED	APPROVED	TDP:78	DATE: 12/98	REV:1
DELMARVA POWER & LIGHT COMPANY ELECTRIC DISTRIBUTION STANDARDS ENGINEERING MANUAL			Example Pole Class Calculation		

Step 6. For Grade C Construction, the safety factor for transverse wind loading on a pole is 2.58 (table B2)

$$59,606 \times 2.58 = 153,783 \text{ ft/lb. minimum strength of pole at ground line}$$

Steps 7. Steps 7 not needed since there is no angle.

Step 8. Turning to table B7, looking for pole diameter corresponding to a minimum ground line ultimate moment of 153,783 ft/lb.:

$$13.37 \text{ inches (156,500 ft/lb.)}$$

Step 9. Turning to pole dimension tables on page B-17.2, for 45' pole, the pole class necessary for a ground line diameter of 13.37 inches is Class 1 (13.61")

Example Calculation to Determine if an Existing Pole's Setting Depth is Great Enough to Prevent Leaning

Assume an existing pole is a 45 foot Class 1 set with the birthmark 3'-8" above ground. Is the setting depth adequate to hold the loading calculated in the pole class calculation above?

1. Safety Factors

Since the safety factors for foundations are different from safety factors for poles, we have to go back to the loading prior to the application of safety factors.

From step 4 of pole class calculation:

Total Working Moment Due to Wind = 59,606 ft/lb.

For Grade C Construction, the safety factor for transverse wind loading on a pole foundation is 2.20 (table B2)

$$59,606 \times 2.20 = 131,133 \text{ ft/lb minimum strength of pole foundation.}$$

2. Foundation Strength Calculation

Pole Length $L = 45$

Pole Setting Depth $D = 10'2" - 3'8" = 5'6"$

The pole is located in wetlands area. An A. B. Chance soil probe is used. The probe torque is 510 inch-lb. Per table B9, 510 inch-lb corresponds to class 3 soil ($S=3$).

$$M = \frac{(L - D - 2) \times (157.5 - (S \times 17.5)) \times D^{3.75}}{L - 2 - (0.662 \times D)}$$

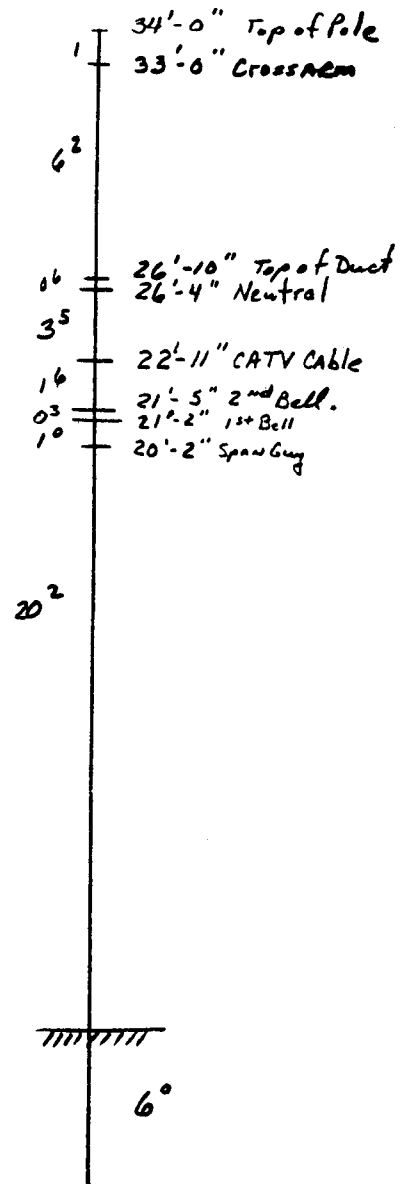
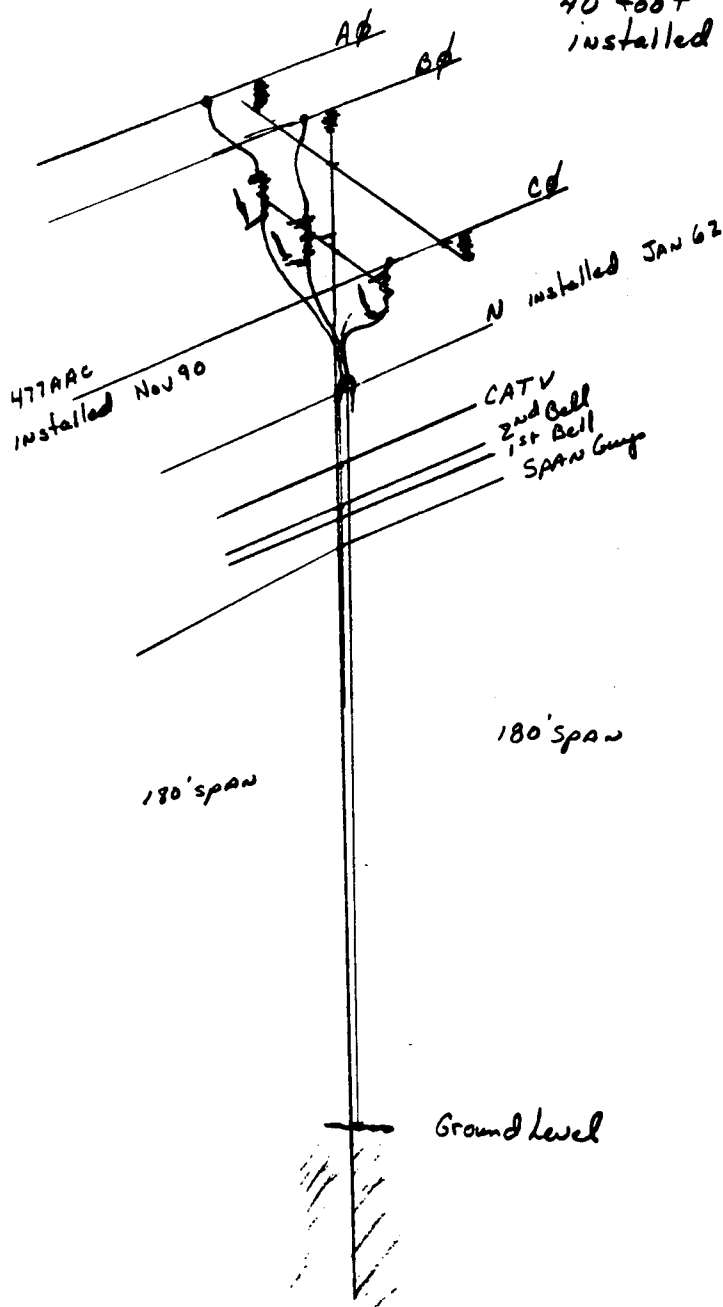
$$M = \frac{36.5 \times 105 \times 1118}{38.70} = 110,716 \text{ ft/lb.}$$

Since this is less than the required 131,133 ft/lb., the setting depth is not adequate.

DRAWN: CEB	DEVELOPED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	TDF: 76	DATE: 12/98	REV: 1
DELMARVA POWER & LIGHT COMPANY ELECTRIC DISTRIBUTION STANDARDS ENGINEERING MANUAL			Example Pole Class Calculation		

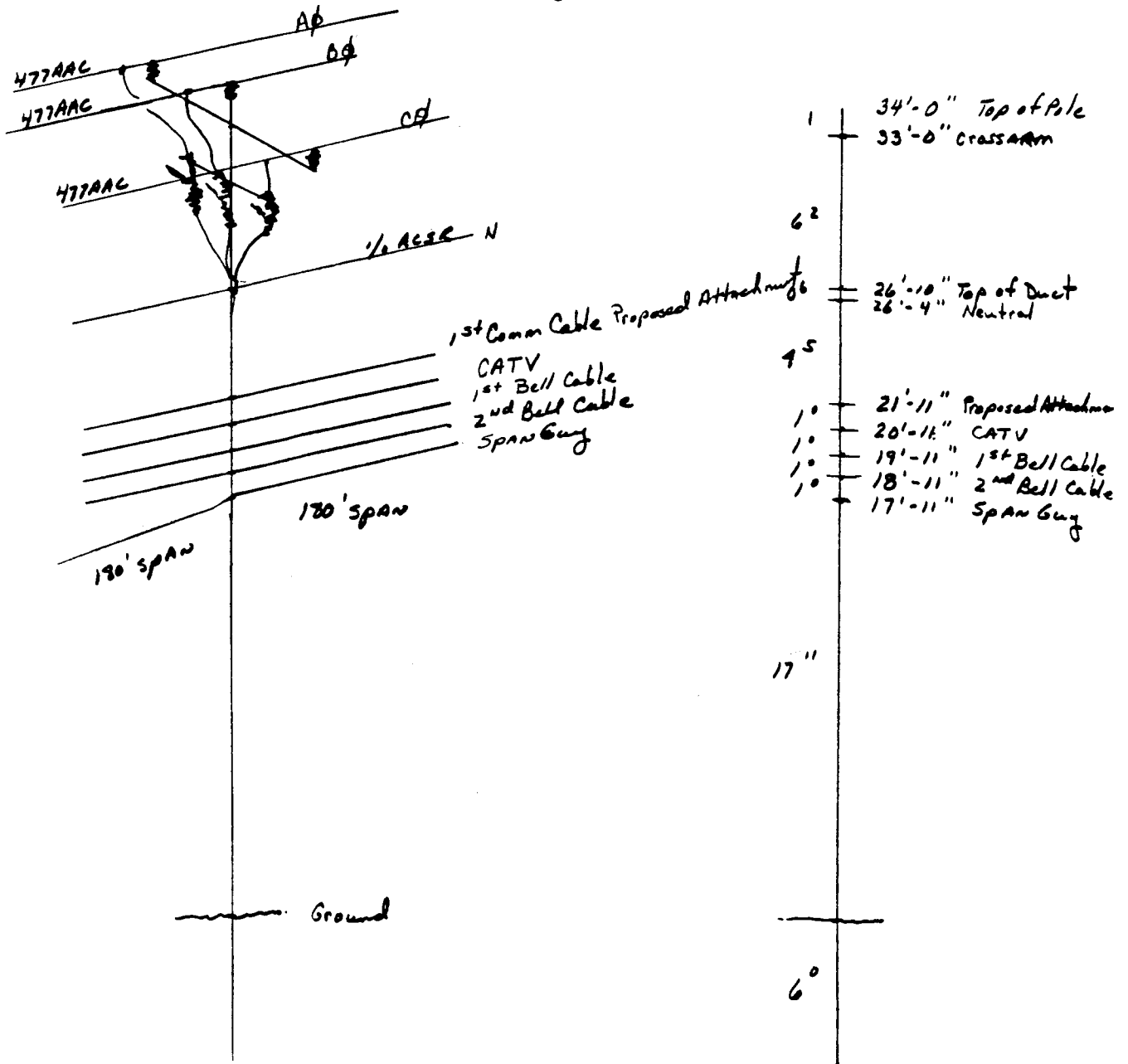
Existing
44436/40451

40 foot Pole
installed JAN 1976



Proposed Attachment 44436/40451

Elevations Assuming
Pole Strength is satisfied



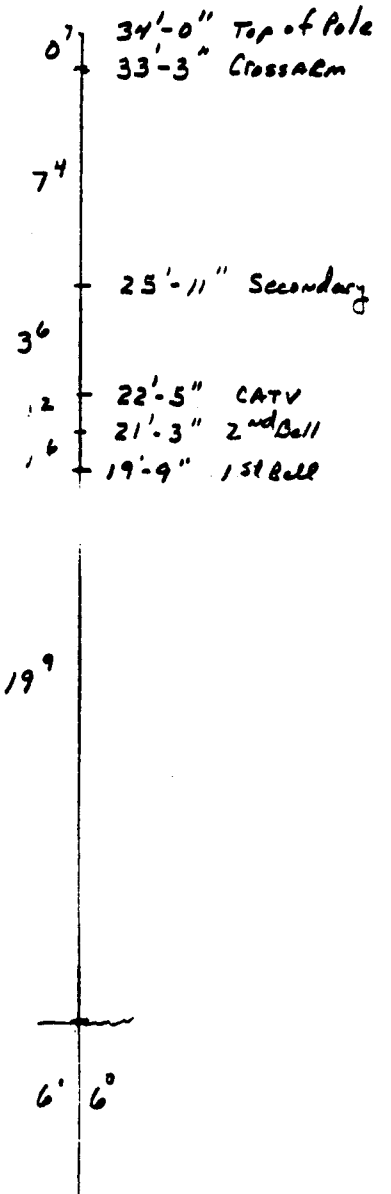
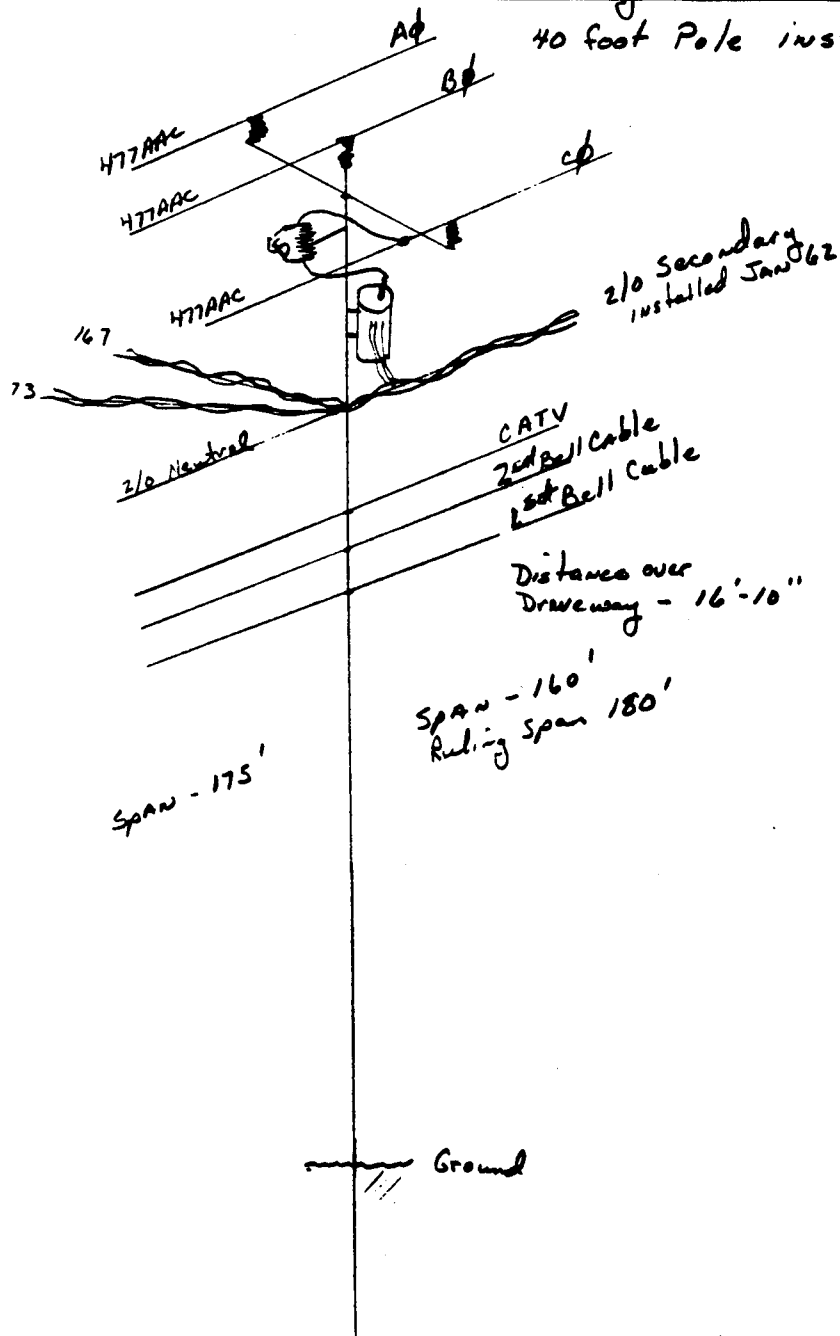
44436/40451

40' pole Clearance wise
is OK

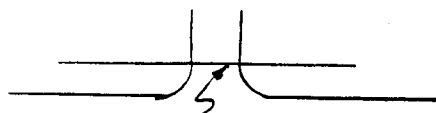
Conclusion: Assuming Pole Strength is acceptable. There are no driveways in either span then this proposed pole Attachment can be made by lowering CATV, BELL CABLES And the span Guy and meet the 1997 NESC Codes. without replacement of the Pole.

Existing 44440/40522

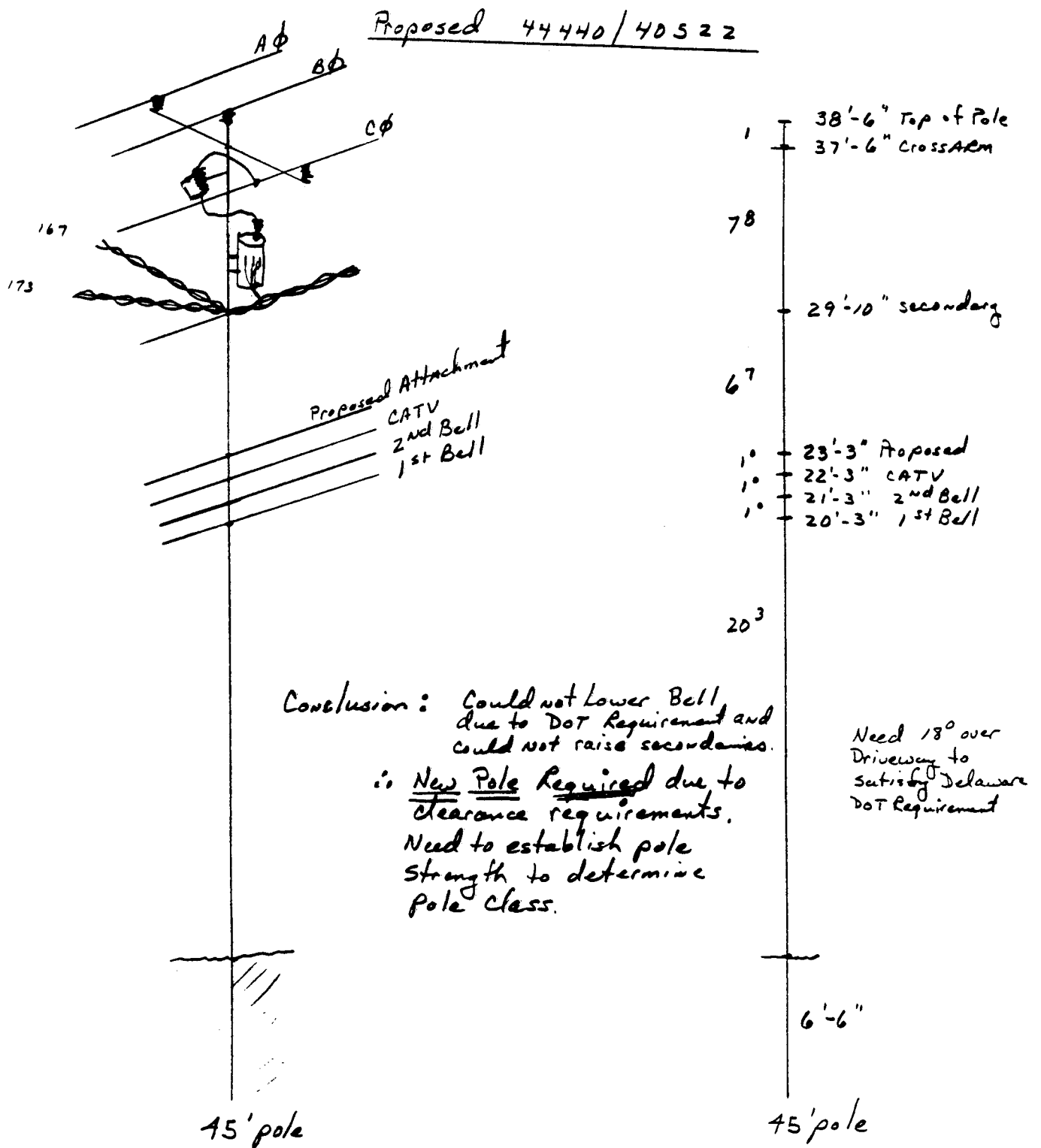
40 foot Pole installed Jan 1965



Existing



16'-10" Midspan Elevation
for Bell Cable Above
Driveway.



WORKSHOPS

WORKSHOP #1

Coordination of New Attachments (Poles, Conduit, Rights of Way)

**Tom Jackson
Georgia Power Company
241 Ralph McGill Boulevard, N.E.
Atlanta, GA 30308-3374
(404) 506-2428 Phone
(404) 506-3280 FAX
tvjackson@southernco.com**

&

**Wil Arnett
Utility Support Services
P.O. Box 100
Roopville, GA 30170
(770) 854-7772
(770) 854-7773 FAX**

WORKSHOP #2

Problems Relating to Permitting (Climbing Space)

**Rex Brooks
Gulf Power Company
1 Energy Place
Pensacola, FL 32520
(850) 444-6347 Phone
(850) 444-6302 FAX
rbrooks@southerco.com**

WORKSHOP #3

Directional Boring

**Steve McLaughlin
Pledger, Inc.
2848 S.E. Suzanne Drive
Hobe Sound, FL 33455-9747
(561) 546-4848**

WORKSHOP #4

Federal-Aid Issues

**Paul Scott
Highway Engineer
Office of Engineering (HNG-10)
Federal Highway Administration
400 Seventh Street, SW., Room 3134
Washington, D.C. 20590
(202) 366-4104 Phone
(202) 366-3988 FAX
paul.scott@fhwa.dot.gov**

LIST OF PARTICIPANTS

NATIONAL JOINT USE CONFERENCE ROSTER

OCTOBER 26-27, 1998

WILLIAM ABBOTT
POLE MAINTENANCE COMPANY
PO BOX 707
COLUMBUS, NE 68602-0707
402-563-2663
FAX 402-564-9508
EMAIL pmcpole@megavision.com

ULRICH O. ANGLETON
CINERGY SERVICES, INC.
301 HOME AVE.
TERRE HAUTE, IN 47803
812-231-6713
FAX 812-231-6790
EMAIL uangleton@Cinergy.com

WIL ARNETT
UTILITY SUPPORT SERVICES
P.O. BOX 100
ROOPVILLE, GA 30170
(770) 854-7772
FAX (770) 854-7773

DWAYNE A ATWELL
CITIZENS COMMUNICATIONS
8800 N. CENTRAL EXPRESSWAY
DALLAS, TX 75231
214-365-3579
FAX 214-365-3680
EMAIL datwell@czn.com

MIKE A. BAILEY
OHIO DEPT. OF TRANSPORTATION
400 WILLIAM ST.
DELAWARE, OH 43015
740-363-1251 - EXT. 260
FAX 740-369-3351

THOMAS R. BANE
FLORIDA DOT
605 SUWANEE
TALLAHASSEE, FL 32399-0450
850-414-4365
FAX 850-922-9293

ERICE H.W. BAWN
NEW BRUNSWICK POWER
515 KING ST.
FREDERICTON, NB E3B 4X1
506-458-3770
FAX 506-458-4000
EMAIL ebawn@nbpower.com

ROBERT A. BLAIR
TIME WARNER CABLE
5015 CAMPUSWOOD DR.
E. SYRACUSE, NY 13057
315-463-2288 EXT. 250
FAX 315-463-2088
EMAIL BOBBLAIR@ATWCABLE.COM

JEFFREY L. BLOUNT
WV DIVISION OF HIGHWAYS
1900 KANAWHA BLVD. E.
CHARLESTON, WV 25305
304-558-3656
FAX 304-558-0454
EMAIL jblount@mail.dot.state.wv.us

PAUL D. BLOUNT
AMERICAN ELECTRIC POWER
PO BOX 2021
ROANOKE, VA 24022
540-985-2650
FAX 540-985-2921

ROBERT A. BOUFFARD
SNET
1441 N. COLONY RD.
MERIDEN, CT 06450
203-238-5620
FAX 203-237-8902

CARMA J. BOYD
ENTERGY
7701 FRAZIER PIKE
LITTLE ROCK, AR 72206
501-490-3731
FAX 501-490-3760

TERI B. BRIERLY
CINERGY CORP.
139 E. 4TH STREET - ROOM 467A
CINCINNATI, OH 45201
513-287-1077
FAX 513-287-1743
EMAIL TBRIERLY@CINERGY.COM

BOBBY J. BRIGHTWELL
MEDIA ONE, INC.
2925 COURTYARDS DRIVE
NORCROSS, GA 30071
770-559-2064
FAX 770-559-2134
EMAIL Bbrightwell@mediaone.com

REX BROOKS
GULF POWER CO.
1 ENERGY PLACE
PENSACOLA, FL 32520
850-444-6347
FAX-850-444 6302
EMAIL- rbrooks@southernco.com

NEIL T. BUSKE
NIAGARA MOHAWK
300 ERIE BLVD. W.
SYRACUSE, NY 13202
315-428-5530
FAX-315-428-5817
EMAIL- busken@nimo.com

BOB BUTERA
OSMOSE
980 ELLICOTT ST.
BUFFALO, NY 14209
716-882-5905
FAX-716-882-7822
EMAIL- bbutera@osmose.com

RAY A. CALLAHAN
IOWA DOT
800 LINCOLN WAY
AMES, IOWA 50010
515-239-1678
FAX-515-239-1005
EMAIL- ray_callahan@idot.e-mail.com

MIKE CALLIS
E-470 PUBLIC HIGHWAY AUTHORITY
7600 E ORCHARD RD. - SUITE- 370 SO
GREENWOOD VILLAGE, CO 80111
303-773-9588
FAX-303-202-9845
EMAIL- Mike@E-470.com

JOHN T. CHAUCER
BELLSOUTH
NORTH W3D2
3535 COLONNADE PKWY
BIRMINGHAM, AL 35243
205-977-2631
FAX-205-977-7997
EMAIL- John T. Chaucer@berdal.bellsouth.com

ROBERT EARL CHRISTIAN
BELLSOUTH
301 W. BAY ST. - ROOM 15FF1
JACKSONVILLE, FL 32202
904-350-3554
FAX-904-350-2720
EMAIL- EARL.CHRISTIANI@BRIDGE.BELLSOUTH.COM

TOM CROWELL
PUBLIC SERVICE COMPANY OF OKLAHOMA
212 E. TTH STREET
TULSA, OK 74119
918-599-2086
FAX-918-599-2543
EMAIL- tcrowell@scw.com

KIM A. DAIRE
CLECO
PO BOX 5000
PINEVILLE, LA 71361-5000
318-484-7511
FAX-318-484-7394
EMAIL- kim Dair@cleco.com

GLENN A DAVIS
CONNECTIV
I-95 & RT 273
NEWARK, DE 19714-9239
302-454-4385
FAX-302-454-4034
EMAIL- glenn.davis@connectiv.com

MICHAEL E. DAVIS
DUKE ENERGY
182 TALBERT ROAD
MOORESVILLE, NC 28117-9123
704-664-6833
FAX-704-664-6870
EMAIL- medaivs@duke-energy.com

DON DAWSON
ALLTLE
50 EXECUTIVE PARKWAY
HUDSON, OH 44236
330-650-7689
FAX-330-650-7480
EMAIL- don.dawson@alltel.com

JOHN S. DEAKLE
MISSISSIPPI POWER CO.
PO BOX 4079
GULFRONT, MS 39502-4079
228-870-1217
FAX-228-865-5960
EMAIL- John . S. Deakle@MPC.com

TIMOTHY A. DISMOND
SPRINT
1200 MAIN
KANSAS CITY, MO 64105-2148
816-854-3897
FAX-816-854-4425
EMAIL- timothy.a.dismond@mail.sprint.com

HENRY J. DRENT
BELL CANADA
174 GREENHILL
NORTH BAY
ONTARIO, CANADA PIC 1H8
705-474-5005
FAX-705-474-6062
EMAIL- henry.drenth@sympatico.ca

ROBERT S. DUPREE
GPU TELCOM SERVICES
ROUTE 183 & VAN REED RD.
READING, PA 19612-5164
610-375-5600
EMAIL- rdupree@gpu.com

MARK R. EDGINTON
WOOLPERT LLP
409 EAST MONUMENT AVENUE
DAYTON, OHIO 45402-1261
937-341-9586
FAX-937-461-0743
EMAIL-mark.edgington@woolpert.com

JOHN R. EISEMAN
CABLEVISION SYSTEMS
1 MEDIA CROSSWAYS
WOODBURY, NY 11797
516-393-3445
FAX-516-364-8485
EMAIL- jeiseman cablevision.com

KATHRYN L. FEENEY
SPRINT
5454 WEST 110TH
OVERLAND PARK, KS 66211
913-345-7946
FAX-913-345-7568
EMAIL-Kathryn.Feeney@sprint.mail.com

LISA M. FOUNTAIN
TELERGY
1 TELERGY PARKWAY
EAST SYRACUSE, NY 13057
315-431-2730
FAX- 315-437-0685
EMAIL-FOUNTALM@TELERGY.NET

BILL M. FRANCESCONI
PENNSYLVANIA POWER CO.
1 EAST WASHINGTON STREET
NEW CASTLE, PA 16103-0891
724-656-5339
FAX-724-656-5303
EMDIL- francesconew@firstenergycorp.com

JIM GIANCOLA
BELL ATLANTIC -PA
900 RACE ST. - 6TH FLOOR
PHILADELPHIA, PA 19107
215-931-4931
FAX-215-592-0907
EMAIL- james.j.giancola@bellatlantic.com

BECKY GLARROW
BELLSOUTH
201-100 PERIMETER CENTER PL.
ATLANTA, GA 30346
770-391-5762
FAX-770-399-5626
EMAIL- becky.glarrow1@bridge.bellsouth.com

DON H. GORDON
CONSULTANT
5433 LAKEVIEW DR.
GREENDALE, WI 53129
414-421-3749
EMAIL- dgordo@juno.com

JAY K. GORDON
BELLSOUTH
11741 N. MAIN ST.
JACKSONVILLE, FL 32218
904-757-9651
FAX-904-757-9970
EMAIL- Jay.K.Gordon@bridge.bellsouth.com

MARVIN GRAHAM
KENTUCKY UTILITIES COMPANY
ONE QUALITY STREET
LEXINGTON, KY 40507
606-226-1245
FAX-606-367-1154
EMAIL- Marvin.Graham@kuenergy.com

MICHAEL J. GREAT
COM*ED
T&D BUSINESS SVCS. DEPT.
35 FN EAST
10 S. DEARBORN ST.
CHICAGO, IL 60603
312-394-5448
FAX-312-394-7729
EMAIL- MICHAEL.J.GREAT@UCM.COM

GORDON HANS P. E., RPLS
GEOTRACK, INC
3411 GARTJ RD/ - SUITE 215
BAYTOWN, TX 77521
281-420-9491
FAX-281-422-0941

DEBRA A. HARRIS
KY TRANSPORTATION CABINET
977 PHILLIPS LANE
LOUISVILLE, KY 40233
502-367-6411
FAX-502-368-4255
EMAIL- dharris@mail.kytc.state.ky.us

JIM A. HEARST
6500 WEST LOOP SOUTH
SOUTHWESTERN BELL
BELLAIRE, TX 77401
713-567-4680
FAX-713-567-7622
EMAIL- jh3647@txmail.sbc.com

GARY E. HEUSMAN
SRP
PO BOX 52025
MAIL STATION XCT 324
PHOENIX, AZ 85072-2025
602-236-3780
FAX-602-236-3750
EMAIL- geheusma@srp.gov

CHRISTOPHER M. HIBBETT
OHIO DEPT. OF TRANSPORTATION
317 E. POE RD.
BOWLING GREEN, OH 43402
419-353-8131-EXT 4238
FAX-419-353-1468
EMAIL- chibbett@odot.dot.ohio.gov

LYNN C. HILL
OHIO RURAL ELECT. COOPERATIVES, INC.
6677 BUSCH BLVD.
P.O. BOX 26036
COLUMBUS, OH 43226-0036
614-846-5757
FAX-614-846-7108
EMAIL- lch@buckeyepower.com

KAREN HIMES
LOUISVILLE GAS & ELECTRIC CO.
10300 BALLARDSVILLE RD.
LOUISVILLE, KY 40241
EMAIL- KAREN.COM@LGE ENERGY

DAN G. HOGAN
SOUTHWESTERN BELL
12851 MANCHESTER RD.
DES PERES, MO 63131
314 505 1782
FAX-314 505 1887
EMAIL- dh2053@momail.sbc.com

GREGORY HOHL
WASHINGTON SUBURBAN SANITARY COMMISSION
14501 SWEITZER LANE
LAUREL, MD 20207
301-206-8733
FAX-301-206-8722
EMAIL- GHOHL@WSSC.DST.MD.US

TOM HUDOCK
ALLTEL
50 EXECUTIVE PARKWAY
HUDSON, OH 44236
330-650-7682
FAX-330650-7480
EMAIL- thomas.hudock@alltel.com

PAUL INGRAM
BC/TEL
10-3777 KINGSWAY
BURNABY, BC CANADA V5H3Z7
604-432-4970
FAX-604-431-8473

DAVE S. ISAACSON
AMERICAN ELECTRIC POWER
PO BOX 60
FORT WAYNE, IN 46801
219-421-1448
FAX-219-421-1605

THOMAS V. JACKSON
GEORGIA POWER COMPANY
241 RALPH MCGILL BLVD. NE
ATLANTA, GA 30308-3374
404-506-2428
FAX-404-506-3280
EMAIL- tvjackso@southernco.com

TERRENCE JERREALS
505 SOUTH S.R. 741
LEBANON, OH 45036-9518
513-932-3030 EXT 227
FAX-513-932-7651

JOEY D. JOHNSON
VENTURE SUM CORPORATION
9102 AVIATION BLVD. - SUITE BW2
CONCORD, NC 28027
704-721-4199
FAX-704-721-4202
EMAIL- venturesum@msn.com

JOHN JOHNSON
BUTLER COUNTY ENGINEER'S OFFICE
1921 FAIRGROVE AVE. (S.R. 4)
HAMILTON, OH 45011-1999
513-867-5744
FAX-513-867-5849
EMAIL-JOHNSONJ@BCEO.ORG

OZZ JOHNSON
FIRST ENERGY
76 SOUTH MAIN ST.
AKRON, OH 44308
330-384-5713
FAX-330-384-3867
EMAIL- wojohnson@firstenergycorp.com

DAVE JONES
TELUS CORP.
10020 - 100 ST. - RM 21D
EDMONTON ALBERTA CANADA
T5J 0N5
403-493-5254
FAX-403-493-3066
EMAIL- dave.jones@telus.com

STEVE JONES
OHIO DEPT. OF TRANSPORTATION
705 OAKWOOD ST.
RAVENNA, OH 44266
330-297-0801 EXT-298
EMAIL- sjones@odot.dot.ohio.gov

PATTY A. KARNES
SPRINT
600 NEW CENTURY PARKWAY
NEW CENTURY, KS 66031
913-791-7518
FAX-913-791-2315

TOM KENNEDY
FLORIDA POWER & LIGHT CO.
9250 W. FLAGLER ST.
MIAMI, FL 33174
305-552-3027
FAX-305-228-5695
EMAIL- t_j_kennedy@fpl.com

WALTER D. KLOOSTRA
ONTARIO HYDRO
140 ALLSTATE PKWY
MARKHAM, ONTARIO L3Y8
905-944-2926
FAX-905-944-2934
EMAIL- w.d.kloostra@hydo.on.ca

DAVID F. KUHLMAN
FLORIDA POWER & LIGHT CO.
PO BOX 029100
MIAMI, FL 33102-9100
305-552-2995
FAX-305-228-5695
EMAIL- K.F.JUHLMAN@FPL.COM

LARRY O. LEE
CINCINNATI BELL TELEPHONE CO.
BLDG 0 102 - RM 278
PO BOX 2301
CINCINNATI, OH 45201
513-397-6318
FAX-513-784-1713
EMAIL- llee@cinbill.com

JEFFREY K. LEWIS
505 SOUTH S.R. 741
LEBANON, OH 45036-9518
513-932-3030
FAX-513-932-7651
EMAIL- jlewis@odot.dot.ohio.gov

DAN C. MANN
BELLSOUTH
ROOM 617
1600 HAMPTON ST.
COLUMBIA, SC 29201
803-748-8838
FX-803-799-3445
EMAIL- DANIEL.MANN@BRIDGE.BELLSOUTH.COM

MESHELL A. McCUEN
PUBLIC SERVICE COMPANY OF OKLAHOMA
212 E. 6TH STREET
TULSA, OK 74199
918-599-2493
FAX-918-599-2493
EMAIL- mmccuen@csww.com

GRACE McDOUGALD
945 EAST PACES FERRY RD.
ATLANTA, GA 30326
404-841-2255
FAX-404-841-2315
EMAIL- GMcDOUGA@COLPIPE.COM

JAMES E. McGRATH
OHIO DEPT. OF TRANSPORTATION
705 OAKWOOD ST.
RAVENNA, OH 44266
330-297-0801- EXT 303
FAX-330-296-3747
EMAIL- jmcgrath@odot.dot.ohio.gov

BILL MAC RONALD
NORTH PENN TELEPHONE CO.
34 MAIN STREET
P.O. BOX 349
PRATTSBURGH, NY 14873
607-522-3712
FAX-607-522-4228

RONALD L. McMAINS
CINERGY SERVICES, INC.
301 HOME AVE.
TERRE HAUTE, IN 47803
812-231-6718
FAX-812-231-6790
EMAIL- rmc mains@cinergy.com

DENIS A. MARQUIS
BELL CANADA
1050 BEAVER HALL HILL
MONTREAL QUEBEC, CANADA H2Z 1S4
514-870-2565
FAX-514-391-2037
EMAIL- denis.marquis@bell.ca

SYLVAIN MERCIER
HYDRO-QUEBEC
680 SHERBROOKE STREET, WEST - 15TH FLOOR
MONTREAL, QUEBEC, CANADA H3C 4T8
514-289-2211-EXT 7163
FAX-514-289-7178
EMAIL- mercier.sylvain@hydro.qc.ca

GUY W. MICK
WV DIV OF HIGHWAYS
1900 KANAWHA BLVD. E.
CHARLESTON, WV 25305
304-558-3656
FAX-304-558-0454

GARY MIELKE
TELUS CORP.
10020-100 ST, - RM 21D
EDMONTON ALBERTA CANADA
T5J 0N5
403-493-5525
FAX-403-493-3066

BOB MITTNACHT
WISCONSIN ELECTRIC POWER
231 W. MICHIGAN ST.
MILWAUKEE, WI 53201
414-221-3617
FAX-414-221-2611
EMAIL- robert.mittnacht@wemail.wisenergy.com

SHARYN M. O'HARA
730 FOREST EDGE DRIVE
VERNON, HILLS, IL 60061
847-634-6341
FAX-847-634-2233
EMAIL- soharam@aol.com

JAMES S. OLSON
IOWA DEPT. OF TRANSPORTATION
800 LINCOLN WAY
AMES, IA 50010-6993
515-239-1551
FAX-515-233-7835
EMAIL- jolson@iadot.e-mail.com

RANDY OVASKA
NORTHERN STATES POWER CO.
100 NORTH BARSTOW ST.
EAU CLAIRE, WI 54701
715-839-2690
FAX-715-839-4670

CHRIS PATCHOURAS
INDEPENDENT CONTRACTOR
108 DAVID LN
HAWTHORN WOODS, ILLINOIS 60047
847-540-7273

JOHN E. PENDLETON
SYSTEMS ENGINEERING & ELECTRICAL CO., INC.
422 1/2 5TH STREET
COLUMBUS, IN 47202
802-376-33756
FAX-812-376-6966

MARILYN E. PINEAU
UTILITY CONSULTANTS, INC.
427 C. R. 136
WILDWOOD, FL 34785
352-748-4436
FAX-352-748-4436

MARIE H. PIPER
BELLSOUTH TELECOMMUNICATIONS
22C45 BELL SOUTH CTR.
675 W. PEACHTREE ST.
ATLANTA, GA 30375
404-927-8631
FAX- 404-523-2378
EMAIL- marie.h.piper@bridge.bst.bls.com

REVA M. REED
CHAIRMAN
PO BOX 845
UNIONTOWN, OH 44685
330-699-6777

MIKE REHM
SPRINT
1200 MAIN ST.
MAIL STOP - MOKCMT1004
KANSAS CITY, MO 64105
816-854-3635
FAX-816-854-4425

CLARE P. RIEPMA
MINISTRY OF TRANSPORTATION
301 ST. PAUL ST.
ST. CATHARINES, ONTARIO L2R 7R4
905-704-2918
FAX-905-704-2828
EMAIL- riepma@mto.gov.on.ca

MICHAEL D. ROBINSON
DUKE ENERGY CORPORATION
182 TALBERT ROAD
MOORESVILLE, NC 28117-9123
704-664-6837
FAX-704-664-6870
EMAIL- mdrobins@duke-energy.com

TERRI M. ROSAMOND
MEDIA ONE
2925 COURTYARDS DR.
NORCROSS, GA 30071
770-559-2868
FAX-770-559-2143
EMAIL- tmurray@mediaone.com

RICHARD R. RUCKER
PUGET SOUND ENERGY, INC.
PO BOX 97034
BELLEVUE, WA 98009-9734
206-224-2219
FAX-206-224-2318
EMAIL- rrucke@puget.com

TOM G. ST. PIERRE
AMERICAN POWER
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215
614-223-1658
FAX-614-223-1687

RAMONA E. SAYRE
CONFERENCE REGISTRAR
PO BOX 403
PERRY, OH 44081
440-259-3741
FAX- 440-259-3741

GARY W. SCOTT
WV DIVISION OF HIGHWAYS
BLDG 5
1900 KANAWHA BLVD. E.
CHARLESTON, WV 25305
304-558-3656
FAX-304-558-0454
EMAIL- gscott@mail.dot.state.wv.us

PAUL SCOTT
FEDERAL HIGHWAY ADMN.
440 - 7TH ST. S. W. - HNG 10
ROOM 3134
WASHINGTON, DC 20590
202-366-4104
FAX-202-366-3988

DAVID SELDNER
SPRINT
1200 MAIN
KANSAS CITY, MO 64105
816-854-4548
FAX-816-854-4425
EMAIL- DAVID.SELDNER@MAIL.SPRINT.COM

ALBERT J. SHAFFER
AMERICAN ELECTRIC POWER
PO BOX 24400
CANTON, OH 44701-4400
330-438-7953
FAX-330-438-7336

LES SHERWOOD
COM*ED
T&D BUSINESS SVCS. DEPT.
35 FN EAST
10 S. DEARBORN ST.
CHICAGO, IL 60603
312-394-5447
FAX-312-394-7729
EMAIL- leslie.d.sherwood@ucm.com

JANET A. SHULTZ
PP&L, INC.
TWO NORTH NINTH ST.
ALLENTOWN, PA 18101-1179
610-774-6293
FAX-610-774-5177
EMAIL- jashultz@papl.com

JO ELLEN SNELL
E-470 PUBLIC HIGHWAY AUTHORITY
7600 E. ORCHARD RD. - STUIE 370 SO.
GREENWOOD VILLAGE, CO 80111
303-773-9588
FAX-303-220-9845
EMAIL- Jo@e-470.com

DAVID SPISAK
OHIO DEPT. OF TRANSPORTATION
505 SOUTH STATE ROUTE 741
LEBANON, OH 45036-9518
513-932-3050
FAX-513-932-7651

KATHRYN B. STANLEY
ENTERGY
639 LOYOLA AVE.
NEW ORLEANS, LA 70113
504-576-2663

JOHN P. SULLIVAN
2213 SW 153RD DR.
BEAVERTON, OR 97006
503-672-5569
FAX-503-672-5555
EMAIL-John_Sullivan@pgn.com

GUY THERRIEN
MANITOBA TELECOM SVCS.
PO BOX 6666
489 EMPRESS ST.
WINNIPEG, MANITOBA, CANADA
R3C CV6
204-941-5001
FAX-204-774-9441
guy.therrien@mts.mb.ca

THOMAS R. THOMAS
BELLSOUTH
ROOM 10 W. 3D2
3535 COLONNADE PARKWAY
BIRMINGHAM, AL 35243
205-977-2682
FAX-205-977-7997

TERRY TOMS
LOUISVILLE Gas & ELECTRIC CO.
NO ADDRESS PROVIDED
LOUISVILLE, KY 40241
502-364-8434

WILLIAM J.P. TYLER
BELLSOUTH
3535 COLONNADE PKWY
S3D1
BIRMINGHAM, AL 35243
205-977-5564
FAX- 205-977-0758
EMAIL- William J. Tyler@bridge.bellsouth.com

BILL UPTON
BELLSOUTH
601 W. CHESTNUT ST.
LOUISVILLE, KY 40203
502-582-2196
FAX-502-582-2176

PAT VALLEY
ALLIANT-WISCONSIN POWER & LIGHT CO.
222 W. WASHINGTON AVE.
MADISON, WI 53522
608-252-3027
FAX-608-252-5702
EMAIL-patvalley@alliant-energy.com

BRANDEN J. WAGNER
AMERICAN ELECTRIC POWER
700 MORRISON ROAD
GAHANNA, OH 43230
614-883-7525
FAX-614-883-7575

ANGELA D. WALLACE
NATIONAL JOINT UTILITY
NOTIFICATION SYSTEMS (NJUNS)
3400 SUMMIT RIDGE PKWY.
DULUTH, GA 30096
770-623-9913
FAX-770-623-1847
EMAIL- Wallacea@ix.netcom.com

KENNETH E. WELDON
FLORIDA DEPT. OF TRANSPORTATION
605 SUWANNEE
TALLAHASSEE, FL 32399-0450
850-414-4364
FAX-850-922-9293

TIMOTHY J. WILCHER
KY TRANSPORTATION CABINET
977 PHILLIPS LANE
LOUISVILLE, KY 40233
502-367-6411
FAX-502-368-4255
EMAIL- twilcher@mail.kytc.state.ky.us
DAVID L. WILLIAMS
ALLEGHENY POWER
800 CABIN HILL DRIVE
GREENSBURG, PA 15601
724-830-5642
FAX-724-838-6177
EMAIL- dwillil@alleghenypower.com

BOB C. R. WILSON
CINERGY CORP.
139 E. 4TH STREET - ROOM 467A
CINCINNATI, OH 45201
513-287-3790
FAX-513-287-1743
EMAIL- crwison@cinergy.com

DARRYLL WILSON
241 RALPH MCGILL
ATLANTA, GA 30308-3374
404-506-2928
FAX-404-506-3280
EMAIL- jdwilson@southernco.com

JAMES WILSON
OHIO DEPT. OF TRANSPORTATION
505 SOUTH STATE ROUTE 741
LEBANAN, OH 45036-9518
513-932-3030
FAX-513-932-7651

RON WOLF
CINERGY CORP.
139 E. 4TH ST - ROOM 467A
CINCINNATI, OH 45201
513-287-2666
FAX-513-297-1743
EMAIL- rqolf@cinergy.com

STEVE G. WOMBACHER
POLE MAINTENANCE COMPANY
4307 23RD ST.
COLUMBUS, NE 68602
402-563-2663
FAX- 402-564-9508

NICHOLAS M. ZEMBILLAS
TBE GROUP, INC.
18167 US 19 NO.
SUITE 550
CLEARWATER, FL 33764
813-531-3505
FAX-813-539-1294
EMAIL-TBENMZ@IX.NETCOM.COM

RON W. ZIMMERMAN
ICG NETCOM
332 W. BROADWAY
LOUISVILLE, KY 40330
502-992-1165
FAX-502-992-1148